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A FRIEND  
IN NEED  
IS A FRIEND  
INDEED

HEALTH HINTS  
FOR  
THE HOME

COMPLIMENTS OF THE  
METROPOLITAN LIFE  
INSURANCE CO.

INCORPORATED BY THE  
STATE OF NEW YORK

375558

This little book is issued—as the cover states—and distributed with the compliments of the

## METROPOLITAN LIFE INSURANCE COMPANY.

A glance at its pages will reveal its aim, and we believe it will be regarded as of value by every household receiving it.

The preservation of health—how to keep in good physical condition—what to do in cases of illness and injury—how to care for one's own household and to be helpful to neighbor or friend—these are subjects in which everybody has a vital and permanent interest.

One very important Health-Hint is omitted from the body of the book, and it is to supply this omission that this cover and page are utilized.

We therefore ask every reader to carefully peruse these pages, and when read to read them over again; and to repeat the operation until this one Hint is learned by heart.

It is a well-known fact that nothing contributes more to a sound bodily condition than a contented mind; in fact, it has been said that "A contented mind is a continual feast."

One of the things that worries the men and women of the land is the Future. What has the Family got to look to for support, when its Head and Provider is dead? What are they relying upon to meet the expenses of sickness and burial if any other member of the family is taken? And as to those without family, how has the individual man or woman provided for his, or her, own later years? Are they so using the Present that it will take care of the Future? If not, they are working straight against "a contented mind."

Now, to meet all this dread and uncertainty Life Insurance was devised, and to supply the very best of which Life Insurance is capable the METROPOLITAN was established. Four Millions of its Policies are now outstanding, and it is paying to its beneficiaries the proceeds of Two Hundred of these policies daily. And the number is increasing. Whose will form the Two Hundred and more of to-morrow, and the next day, and the next? No human being knows. It may be yours, reader! More than Seven Millions of dollars will be distributed among its insured this year, in sums ranging from a few dollars to more than Ten Thousand dollars each! The Company has already paid, in the claims of the dead and in endowments to the living, a sum which, with that now on hand for the security of its insured, amounts to nearly NINETY MILLIONS of dollars.

Now, as we all have to pass away, and as many may reach an unproductive old age, isn't it better to be insured rather than uninsured? Of two families, which has the better outlook for the future—the one in which every member, husband and wife, parent and child, young and old, is carrying a policy; or the family in which not a single member is protected by a dollar of Insurance? Surely this question answers itself.

The METROPOLITAN has three classes of Insurance. In the "INDUSTRIAL" all the healthful members of the family are eligible, from 2 years old next birthday to age 70. Males and females are taken at the same cost. The premiums run from 5 cents a week up, and are collected from the homes of policy-holders by the Agents of the Company. All children's policies are Endowments—payable at certain ages (according to age at

entry) if they are living, payable any time, meanwhile, if they die. Most of the adult policies now issued are also Endowments, so that the old sneer that "one has to die to win" is false. Claims are paid immediately upon the approval of proofs. These policies have other liberal features which we have not space here to set forth.

In its "ORDINARY DEPARTMENT" the METROPOLITAN issues policies from \$1,000 to \$25,000, at a cost considerably below that of other first-class companies, and on plans adapted to all situations and circumstances of life. Premiums are payable yearly, half yearly, or quarterly. Policies are free from restriction as to travel and residence; are clear, concise, business contracts, and provide for the immediate payment of claims. In all policies in which dividends are promised the amount of the dividend is plainly stated and guaranteed.

In its "INTERMEDIATE BRANCH" the METROPOLITAN issues Even-Five-Hundred-Dollar policies on males and females, from ages 12 to 65 nearest birthday; premiums payable yearly, half yearly, or quarterly. They are in full benefit from date of issue. Conditions are plain, simple and easily understood. Provisions and privileges are liberal and extensive. The leading companies do not, in general, issue policies for less than \$1,000, and, as a consequence, many, who can begin only on a smaller amount, have been driven to co-operative, mutual aid, and various irresponsible associations or societies.

These various plans meet all objections by furnishing insurance that insures, and at so low a cost that none need be without it.

Finally, on one of these plans, reader, it is your duty to be insured. It may suit you to have a policy on each of them. Don't go beyond your depth, but don't be without some insurance. On the other hand, if you are already insured and can carry more, take an additional policy. Did you ever hear of a man or woman who received the proceeds of an Endowment Policy or who came face to face with death, who found fault because they had too much Insurance?

Think over what this little book says on this matter, and some day you may come to thank it for its suggestion.

---

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HALEY FISKE, Vice-President.      GEORGE H. GASTON, 2d Vice-President.

GEORGE B. WOODWARD, Secretary.

J. J. THOMPSON, Cashier and Ass't Sec'y.      JAMES M. CRAIG, Actuary

THOMAS H. WILLARD, M. D., Medical Examiner.

STEWART L. WOODFORD, Counsel.

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For further particulars write to the HOME OFFICE, 1 Madison Avenue, New York City, or consult its Agents at the Company's branch offices in any of the principal cities of the United States and Canada.



"A FRIEND IN NEED

IS A FRIEND INDEED"



HOME OFFICE BUILDING



“A FRIEND IN NEED  
IS A FRIEND INDEED”



## HEALTH HINTS FOR THE HOME

HINTS UPON HYGIENE AND THE MANAGEMENT  
OF INFANTS WITH BRIEF NOTES UPON SUR-  
GICAL AND MEDICAL EMERGENCIES AND  
A SHORT ACCOUNT OF THE MORE  
COMMON POISONS AND THEIR  
ANTIDOTES

PUBLISHED BY THE

METROPOLITAN LIFE INSURANCE CO

INCORPORATED BY THE STATE OF NEW YORK

1898

Anvies

WB

120

M594a

1896

Entered according to Act of Congress in the year 1897, by the Metropolitan Life Insurance Company of New York, in the office of the Librarian of Congress at Washington.

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Entered according to Act of Parliament of Canada in the year one thousand eight hundred and ninety-seven, by Thomas Simpson, M. D., in the office of the Minister of Agriculture.



## INTRODUCTION.

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This little manual is issued by the METROPOLITAN LIFE INSURANCE COMPANY of New York, for presentation to its numerous policy-holders and patrons.

The object of the Company is to furnish in a popular form, and in plain, simple language, devoid, as far as practicable, of technical terms, a guide to householders as regards ventilation, cleanliness and kindred matters relating to the hygiene of the dwelling; to advise mothers and nurses in the management of children and in the preservation of their health, and, by practical hints, enable them to combat simple ailments and to recognize the early symptoms of the more prevalent serious diseases of childhood, in order that skilled assistance may be promptly procured; to give information and advice in surgical emergencies; and concerning the more common poisons, their antidotes and the treatment of poisoning are briefly considered.

This book has been cast in a form most convenient for ready reference and a minute index will enable a reader to obtain instant information in emergencies. It has been thought best to add a more thorough discussion of the Hygiene of the Household and the Nursery, which will be found most useful and entertaining by those who have the leisure to read it, and which indeed is worthy of study and thorough mastery by fathers and mothers.

Not all of the book is adapted to the circumstances of all readers, but every policy-holder in this Company will find very much there that meets his needs.

The work was compiled by the Company's Medical Supervisor in Canada, Thomas Simpson, M. D., of Montreal.



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## ACCIDENTS AND INJURIES.

**Bleeding.**—The blood vessels which carry the blood from the heart to all parts of the body are called *arteries*. The blood vessels which return the blood to the heart are called veins. When an artery is cut or wounded the blood flows in jets and spurts and is of a bright red color. When a vein is wounded the blood flows steadily, without spurting, and is of a dark purplish color. It is important to remember this, as the treatment in the two injuries—wound of vein and wound of artery—is different.

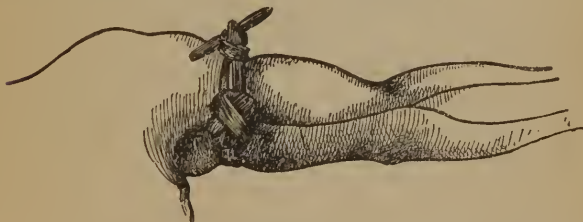


FIG. 1.

SHOWING THE APPLICATION OF A BANDAGE (TOURNIQUET)  
TO ARREST BLEEDING FROM A WOUNDED  
ARTERY IN THE ARM.

**Wounded Arteries.**—Pressure by means of the finger, or some hard substance such as cork, is used. If the wound be of a limb, tie a hard knot on a handkerchief or strip of clothing and pass it

around the limb—the knot being immediately above the wound, that is, between it and the heart—and fasten firmly. (See Fig. 1.) The object being to press the sides of the vessel together by means of the knot—or a potato, or a piece of cork, or any other similar substance at hand, folded in the bandage—and thus close it and prevent the flow of blood from it.

Note well that when an artery spurts scarlet blood, the blood is coming *from the heart*, and that the dark purplish blood flowing steadily from a vein was on its way *to the heart*.

If the wound be on the neck or trunk of the body, try and find the bleeding end of the vessel and pinch it up between the finger and thumb. Clean your fingers well before you put them into the wound. In wounds of the face and scalp, the bleeding can be readily stopped by pressing the bleeding point down on the bone beneath. The application of pieces of ice or cold-water cloths are helpful. If the sufferer be cold and shivering, very hot water (be careful not to scald) should be used instead of cold. Avoid stimulants, such as whisky, except in extreme cases. Fainting often stops the bleeding for the time being, and should be carefully dealt with. Always raise the wounded limb and remove tight clothing.

**Wounded Veins** are usually much less serious, and the bleeding generally ceases on raising the limb and removing all tight clothing. If it should not, gentle pressure *below* the wound and the use of ice or *hot* water will nearly always suffice.

It must be remembered that all this only affords temporary relief—particularly in the case of the arteries—until the surgeon arrives.

**Bleeding after the Extraction of a Tooth** may be so excessive as to prove serious. Apply a piece of ice to the cavity itself, or fill it with a piece of linen or cotton soaked in a strong solution of alum, and keep it in place by the finger or a piece of cork held down by the teeth.

**Bleeding from the Nose** is common in children, and when it occurs frequently it is apt to injure and weaken the child. It is often caused by derangement of the general health. Apply a piece of ice or cold-water cloths to the nose and forehead. Do not bend the head or body forward. Try deep breathing while the hands are held over the head. If these fail, inject a strong hot solution of alum into the bleeding nostril, the mouth being held open during the injection.

Plugging is the last resort, and can only be properly done by the surgeon.

Children who are subject to nose-bleed without any apparent cause may often be cured by a moderate use of lemonade, containing little or no sugar, at meals.

**Bleeding from the Lungs** is generally accompanied by cough, and the blood is bright red and frothy. Sometimes it is the result of injury; usually it denotes serious lung trouble.

**Bleeding from the Stomach** (Vomiting of Blood).—In this form the blood is usually dark and sometimes clotted, often mixed with particles of food. Both these forms of bleeding are to be regarded with alarm and treated accordingly. The treatment of both—bleeding from the lungs and from the stomach—at the time, is much the same:

remove clothing, place the patient in bed in a cool room, raise the head and shoulders and give him small pieces of ice to suck or swallow; if not chilled, cold cloths should be applied to the chest or stomach, and at the same time warmth may be used to the legs and lower part of the body. Quiet the alarm of the patient, which is often extreme; the trouble is not commonly immediately fatal. All talking should be forbidden, and the simplest food given: beef tea, milk and rice-water, a fresh oyster or two, and so on. Give the food cold unless the patient be very chilly. Mustard poultices are often advisable, but the after-treatment should be left to the physician.

**Wounds.**—There are several sorts of wounds, such as incised, made by sharp cutting instruments; lacerated or torn, made by stones, blunt substances or machinery, and punctured, by bayonets, swords, knives or daggers. The treatment of all these is much the same. In the first place cleanse them thoroughly—use water which has been boiled, if at hand—then with clean fingers remove all matters such as pieces of clothing, grit, sand and glass which may be present. Then see to the bleeding, which may be controlled by one of the methods already described; if the bleeding be copious, see to it first.

In *bruises* and torn wounds, when the parts are easily kept in place, the water dressing may be used from the first, or, instead of simple water, the following lotion may be used: pure carbolic acid one teaspoonful, water one pint, mix thoroughly.

For a small bruised wound of the hand or foot (*mashed toe or finger*) there is no better application than a piece of rag dipped in Friar's Balsam wrapped

around the part. When an open sore remains, dress with carbolized vaseline.

**Poisoned Wounds**, such as snake bites, or the bite of a mad dog, or one supposed to be mad, there is no time to be lost with. If on the arm or leg, at once tie a tight band close above the wound and destroy the poison contained in the wound by means of a red hot nail or wire or any similar thing at hand, then dress with a carbolic lotion (a teaspoonful of carbolic acid to one pint of water). The band may then be removed. Care must be taken in the management of the band so as not to injure the limb. It has been recommended to suck these wounds. This is doubtless good treatment if one can be sure that there is no scratch or sore about the lips or mouth ; if there should be any break in the skin, the person who does the sucking runs a serious risk of himself becoming poisoned. In bites of poisonous snakes whisky may be given freely. *Bites of Animals*—cat, dog, rat, including the bite of a man—wash carefully at once with warm water ; touch with lunar caustic and dress with carbolic lotion.

For the *stings of insects*—wasps, spiders and so on—use one of the common preparations of ammonia (hartshorn), or wetted carbonate of soda, or washing soda, or a pinch of common salt. Any of these applied to the bite will give almost instant relief.

**Gunshot Wounds.**—If the soft parts only are wounded, and no large blood vessel, bone or important organ injured, the treatment should be the same as that recommended for torn wounds—carbolic lotion and rest ; otherwise the wound can

only be successfully treated by the surgeon. The bleeding may be arrested by some of the means already mentioned and the patient placed in as comfortable a position as possible until his arrival. *Remember* that in all wounds rest and cleanliness are most necessary. The cleaner and quieter a wound is kept, the sooner it will heal.

**Serious Accidents and Injuries.**—Don't try to do too much. The first thing commonly done by an unskilled crowd is to strive to place the injured person on his legs, and in certain injuries to the spine, neck and head this may prove fatal to the sufferer. Place the patient gently on his back, with a folded coat or something of the sort under his head, and then go deliberately to work; or, if there is no urgency, such as bleeding, await the surgeon. (See Fig. 2.)



FIG. 2.

LIFTING AN INJURED PERSON.

**Felon, or Whitlow** (sometimes called “**Run Around**”).—Place the finger into a bowl of water in which a small piece of washing soda has been dissolved. The water should be as hot as can be borne, and kept hot. After a time, say fifteen minutes to half an hour, apply a large hot linseed poultice. Do not let the finger become cool be-

tween the water and the poultice, but apply the poultice the moment the finger is taken from the water. This may be repeated four or five times during the day; and if, on the second day, the inflammation is not subdued, which may be known by the increase of the swelling and pain, the finger should be opened by the surgeon. If delayed too long the bone may become diseased and the finger lost or deformed.

**Boils.**—“Crops of boils” point to derangement of the general system, possibly some change in the blood, and require medical treatment. A single boil may often be made to disappear by applying a few drops of turpentine. If this fail, it must be poulticed and opened early.

**Carbuncle** is a larger boil, which is often dangerous to the weak and aged. It requires prompt surgical treatment.

**Earache.**—Into a warm spoon drop ten drops of laudanum and ten of glycerine or sweet oil; drop a few drops of this mixture (warm) into the ear and repeat in half an hour if necessary.

A continuous stream of *hot* water directed into the ear from a fountain syringe, and kept up for a minute or two, is often effectual in earache, but its administration requires skill and experience.

A hot poultice of hops (enclosed in a cotton bag) is an excellent soothing application and promotes sleep.

**Toothache.**—Apply hot flannels to the cheek. A piece of cotton soaked in laudanum, two or three drops, or a small piece of camphor placed in the hollow tooth, often gives relief.



Carbolic acid or creosote is better than laudanum, but care in its use should be exercised.

**The Eye.**—Particles of dust, iron, sand and other similar substances are apt to get into the eye. They are easily removed by a little care, unless they become fixed in the substance of the eye. Draw down the lower lid and wipe off very gently by means of a corner of a fine, clean handkerchief, or strip of cotton. If the speck cannot be seen here, then raise the upper lid over a small pencil (not sharpened) or smooth penholder or knitting-needle, and the speck will probably be found and may be removed. (Fig. 3.) If the speck be imbedded in the eye itself, great care must be observed in its removal. It should be the work of the surgeon. From the frequency with which sparks of iron get into the eyes of blacksmiths, some of them, from practice, become very handy in removing these particles. If lime gets into the eye it should be bathed without loss of time with equal parts of common vinegar and water, letting a little between the lids. The mixture destroys the action of the lime. Wash the eye afterward well with



FIG 3.  
SHOWING THE UPPER LID FOLDED BACK.



warm water and let it rest for a day or two. In dealing with the eyes the greatest gentleness should always be observed.

When reading or sewing at night, do not have the flame of the lamp in your eyes; use a shade, or place the lamp so that the flame is well to the left side or behind the eyes.

If the eyes of a new born infant are red and angry looking, or if there is any discharge or swelling, take him to a physician at once. Do not lose any time. More eyes are lost and blindness caused by inflammation in the eyes of infants than from any other disease or injury. Beware, also, of infection. The matter from an inflamed eye is highly infectious, so that care should be taken not to use the same towels or rags on the healthy eye, even in the same person, which had been used in cleaning and dressing the diseased one.

**The Nose and Ear.**—Children often force buttons, beads, peas or corn into the nostrils and ears. A sneeze will often dislodge them. This may be brought about by a pinch of snuff or by tickling the nostril with a feather. If this plan fail to relieve, take a small fine wire and try to pass a loop behind the foreign substance, and draw it out, something in the same way as a cork is removed from the inside of a bottle. If this fail, the matter must be left to the doctor. Peas and other vegetables should be removed early, as they swell from the warmth and moisture. A pea or button in the *ear* is a much more serious matter, and unless it is well within reach and can be removed easily it should not be touched by the unskilled. The danger is that in the attempt to remove it it may be forced

further into the ear. Never poke a knitting-needle, or, indeed, *any other hard substance*, into the ear. If you find that the bead, or grain of corn, or whatever it may be, is beyond your reach, send for the doctor, and don't make matters worse by further attempts.

Insects sometimes get into the ear and produce pain and trouble. They may readily be got rid of by pouring a little warm oil into the ear. This kills them, when they may be removed by gently syringing the ear with warm water.

For toothache, earache, face ache, and most pains about the head and neck, a pillow of hops will be found most soothing and comforting.

**Frostbite.**—Rub the frost bitten part with snow, or a towel wet with cold water, and keep it away from the heat for some time. If any tenderness remain or the skin peel, dress with carbolized vaseline and cotton wool.

**Burns.**—Remove the clothing carefully, by cutting if necessary, so as not to injure or peel the skin, then bathe gently for a few minutes with water containing a teaspoonful of carbonate of soda to a quart, then apply cloths wet with cold water to the surface, and keep them constantly wet. If the cold cause a feeling of chilliness or chills, it must be removed at once, and the burn dressed with a mixture of two parts of lime water to one of pure linseed oil or olive oil. Give a hot drink (there is nothing better than coffee or ginger tea) to relieve the chill. If the skin is raised in blisters, let the water out carefully by means of a clean needle. Keep the skin whole if possible; it is the best of all dressings.

Sometimes the shock of a large burn is so

severe as to endanger life, and a little wine or other stimulant should be added to the coffee. Act promptly. For deep burns use the water dressing, or carbolic lotion, or carbolized vaseline. They are generally slow to heal, and require frequent changes of lotions or ointments.

**Burns caused by Lime** or potash should be treated by applying quickly vinegar and water, or lemon-juice, or any weak and harmless acid. If caused by powerful acids, such as aqua fortis, lime water is useful. Common fresh earth may be used in handfuls. It destroys the power of the acid. Afterward dress as an ordinary burn.

**Artificial Respiration.**—Sylvester's method is, perhaps, on the whole, to be preferred by the unskilled. It is done in this way. Place the person on his back on the floor, with a roll of clothing or hard pillow beneath his shoulders. Hold the tongue out of the mouth, letting it slip back now and then without loosening the hold; if this cannot be well managed, pass a clean scarf-pin or large darning-needle from above downwards through the tip of the tongue. This will prevent its dropping back into the mouth and throat. Then, kneeling at the patient's head, take a wrist in each hand and draw the arms (keeping them on the floor) well above the head; stretch them. This motion expands the chest and the air rushes in. (Fig. 4.) The arms should be held in this position while the assistant counts one, two, three, slowly; then bring the elbows down slowly, and press them firmly on the sides of the chest, in this way forcing the air again out of the lungs. (Fig. 5.) These movements should be made about fifteen times a minute, and

continued for at least an hour, unless natural breathing shows itself before. If a gasp be made, great gentleness must be used, and the patient assisted, not forced, in his efforts to breathe. During this time another assistant should, with warm flannels, rub the legs and lower parts of the body—always upward. As soon as breathing has been established, place the patient in a warm bed, give him a little hot coffee, and let him sleep. Everything should be done promptly, without delay, but without haste.



FIG. 4.

SYLVESTER'S METHOD OF ARTIFICIAL RESPIRATION—BREATHING. FIRST MOVEMENT, INSPIRATION (THE AIR PASSING INTO THE LUNGS).



FIG. 5.

SECOND MOVEMENT, EXPIRATION (THE AIR BEING FORCED OUT OF THE LUNGS).

**Windpipe.**—Sometimes a piece of meat or other substance lodges at the entrance to the windpipe; if it closes it completely death by suffocation (choking) takes place within a minute or two. Often a sharp blow between the shoulders with the open hand will cause the meat to come away; if it does not, then pass the finger back into the throat to the root of the tongue and try to dislodge it. Sometimes the meat sticks in the *gullet* below the opening of the windpipe; a drink of water and a little patience may cause it to pass on. This accident, at all events, is not so urgent as the former one, and the surgeon may usually arrive in time.

**Lightning.**—When a person is struck insensible by lightning, loosen and open the clothing about the neck and chest and *dash* on cold water. If this fails to bring him to in a few minutes, at once use artificial respiration (described at page 17) and persevere with it for at least an hour, or even two hours if breathing is not restored.

**Drowning.**—Turn the person on his face for a moment and pass the finger into the mouth to the root of the tongue and remove anything that may have collected there. Then use artificial respiration (see page 17) and friction with warm flannels, following closely instructions given on pages 17 and 18.

**Sunstroke.**—Get the patient into a current of cool air, if possible out of the sun, remove the clothing and *dash* (not *pour*) cold water on the body especially on the head and chest—ice water if it can be procured. If the patient can swallow give twenty or thirty drops of aromatic spirits of ammonia or five grains of carbonate of ammonia in a

spoonful of water every hour for three or four hours. Whisky and brandy as a rule are *not* to be used. If the person has ceased to breathe, artificial respiration may be tried, but the case is almost hopeless. Habitual drinkers and persons in weak health are more liable to sunstroke than the temperate and healthy. During extreme heat if the person find his head confused and dizzy, especially if the skin at the same time be hot and *dry*, he had better take precautions. Rest, keep out of the sun, sponge the body with cold water, avoid stimulants of all sorts, and live on the simplest food—fruit, bread, milk, and rice. If thirsty, plenty of water should be taken. Recovery in sunstroke is usually slow and requires careful management.

**Sprains.**—Use hot water first, then perfect rest. If one of the joints of a limb be sprained, bathe it for ten or fifteen minutes with hot water, then bandage, using at the same time a piece of lath or card-board padded with cotton wool or cloth, to prevent motion. After from two to ten days, according to the severity of the sprain, remove the bandage, and rub thoroughly two or three times a day with the hand. Cold water poured from a height of two or three feet is often useful at this stage. As long as the pain is severe, motion and rubbing should be avoided. Severe sprains of a large joint require the surgeon's care.

**Stiff Neck.**—Bathe for ten minutes in hot water, then rub well with camphorated oil. Cover with a piece of flannel. This may be done morning and evening until relieved.

**Broken Bones.**—All that ought to be done is to place the patient in as comfortable a position as possible until the arrival of the surgeon. If the patient with a broken leg has to be moved to a dis-



FIG. 6.

SHOWING THE APPLICATION OF A PILLOW IN FRACTURE OF THE LEG.

tance, place the leg on a pillow (Fig. 6), double it as far as possible around the leg and keep it in place with two or three handkerchiefs or strips of cotton, or a lath, or a stick rolled in a coat or other soft

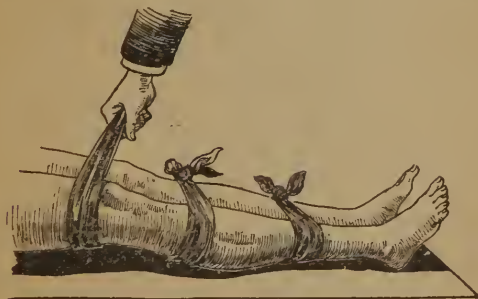


FIG. 7.

THE SOUND LEG USED AS A SPLINT.

material, or an umbrella may be placed on the outside of the leg, and it and the *two legs* bound together by strips of cloth. (Fig. 7.) The object is to keep the two ends of the broken bone in place and prevent motion. This being done, there is no great



hurry in "setting" the bone. *If an arm* be broken, place it in a sling with a piece or two of card-board or shingle to keep it firm and prevent motion. *If the back bone* be injured, the greatest care is necessary in moving the patient, so as to prevent displacement. Carefully slip a sheet or blanket under him and raise him by this means evenly and steadily. The same plan may be used in the case of broken legs.

**Bones out of Joint** (Dislocations) require pretty much the same management, except that they should be attended to by the surgeon as soon as possible and replaced.

**Fainting.**—When a person faints and is pale and cold, carry him out of the crowd, if the accident occurs in a crowded place, lay him on his back on the floor or bed, with his head *low*. Unfasten the clothing about the neck and upper part of the chest. Do not crowd about, but give plenty of air. Sprinkle cold water upon the face and let him smell common smelling salts or *weak ammonia* (hartshorn). Rubbing the limbs will also aid recovery.

When a person falls down insensible, with red face, throbbing pulse and snoring breathing, lay him on his back, loosen his clothing, give him plenty of air, but *raise his head* and shoulders on pillows. Apply a cold wet towel to his head and run for the doctor. Do not give him ammonia to smell or disturb him in any way.

**The Falling Sickness** (Fits or convulsions).—All that needs to be done is to see that the sufferer is prevented from injuring himself and has plenty of air. Opening the hands, rubbing and



putting salt in the mouth, are worse than useless. The less meddling, the better. Send for the doctor at once.



FIG. 8.

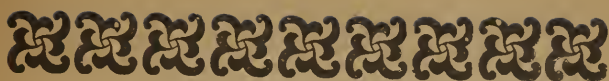
CARRYING AN UNCONSCIOUS MAN.

**Enlarged Veins of the Legs** (Varicose Veins), so common in married women, should be supported constantly, except while in bed, by an

evenly applied bandage or elastic stocking. Common stocking garters should never be worn.

**Clothing on Fire.**—Do not run a distance for water, but catch up a blanket, or carpet, or rug, coat, or any other thing of that sort within reach, and strive to smother the flames by throwing it over the person, and even rolling him on the floor. All this is easily managed with children.





## CARE OF CHILDREN.

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### Infectious Diseases of Children. —

There are certain infectious diseases peculiar to childhood, or to which children are much more subject than grown persons. Infectious diseases are those which may be conveyed from the sick to the healthy or unprotected—diseases which may be “caught.” Scarlet fever and measles are examples. They are contracted by breathing the same air as the sick, or by contact, or they may be carried to great *distances* in the clothing, or in the water or air. In most cases the sweat and discharges of the sick carry the infection.

When a healthy child comes into contact with one suffering from *measles* and takes the disease, from ten to fourteen days elapse before the disease shows itself; during this interval the child enjoys its usual health; there is nothing to point to the trouble that is brewing. It is called the period of incubation.

In the case of *scarlet fever* the interval is from two to six days.

*Small-pox*, ten to fourteen days.

*Chicken-pox*, ten to eighteen days—uncertain.

*Diphtheria*, uncertain—two or three days.

*Typhoid*, six to fifteen days.

*Typhus*, uncertain—three to fifteen days.

*Mumps*, about two weeks.

*Whooping-cough*, about one week.

*Influenza*, a few hours.

All the above diseases, except, perhaps, mild attacks of mumps and chicken-pox, require the watchful care of a physician. Even in their mildest form there is often danger. Unforeseen complications are apt to arise suddenly: dropsy and serious sore throat in scarlet fever, chest and eye inflammations in measles, and so on. Both nurses and physicians must be constantly on their guard.

A few words may be said as to their general management. Fresh air, sunlight and cleanliness are of the very first importance. Unfortunately, the first two cannot always be had, but the cleanliness is within the reach of all. The room in which the patient lies should be as free as possible from sofas, carpets, rugs, clothing and curtains. In short there should be nothing in it but what is absolutely necessary for the comfort of the patient. The window should be kept open more or less, according to the seasons and means of heating. An open fire-place with fire is the best ventilator for ordinary rooms. If the fever run high, frequent sponging of the face and wrists will be comforting to the patient; at the same time see that the feet are warm.

The clothing should be changed morning and evening (guarding the patient from colds and draughts at the time), and if it cannot be conveniently washed, it can at least be exposed to the open air—well aired.

The diet should be of the simplest—bread, or rice and milk, or milk alone. Grapes, with the seeds and skins removed, are excellent; but what agrees with one patient may not suit another.

*Clean cold water* is the best drink. Sometimes, by way of a change, a little lemon-juice or toasted bread may be added. As a rule the patient should have water as often as he asks for it, but in small quantities at a time, so as not to overload the stomach.

Guard the eyes from the light, and the ears from noise. Everything should be kept as quiet as can be. Visitors, and especially children, should be kept away.

Hang a sheet in the doorway and sprinkle it often with carbolized water (two tablespoonfuls of carbolic acid to a gallon of water). This cools and freshens the air, but it cannot be relied on to prevent the spread of the disease. (See Ventilation.)

The body of a person dead of small-pox carries the infection in a high degree, and should therefore be isolated with as great care as during life.

**Carpets and Clothing** have been known to carry the infection of scarlet fever and small-pox for months, and have been known to spread these diseases to great distances.

**The Flesh of Animals** which have suffered from consumption is said to produce the same disease in human beings when used for food.

The presence of decaying vegetables is quite as unwholesome as that of decaying animals.

**Croup** is known by a harsh, brassy cough, difficulty of breathing, and a loud crowing noise upon drawing in the breath. It is often sudden in its attack, and is a most dangerous disease, and the doctor should be called at once. In the meantime wet a strip of cotton or handkerchief in cold water and roll it around the neck, not tightly,

then cover with several folds of flannel; a woollen shawl or comforter will do. Do not wet the clothing or pillow. If this fail to relieve in half an hour give the child twenty drops of ipecac wine every ten minutes till vomiting takes place, and place him in a hot bath for five minutes. The wet cotton may be used for several hours to the throat, changing occasionally, without any danger to the child. After removing it apply a roll of cotton-wool.

**Diphtheria** often comes on with what appears to be a simple sore throat: consequently a sore throat in children always calls for attention and watchfulness. Examine or have the throat examined at once, and, if it is inflamed, or if there is even the suspicion of white spots on it, especially if diphtheria is in the neighborhood, send for the doctor without delay. It is a most infectious and fatal disease, and requires early and active treatment. Give plenty of nourishing food—beef tea, broths, egg-nog, oysters, and so on. Keep the patient in a room by himself and other children at a distance. This rule applies to all the infectious diseases of children, or of grown people, for that matter. *All the discharges* from the mouth and nose should be received upon rags or paper and immediately burned, or they may spread the disease.

**Consumption** is an infectious disease; hence, nurses and friends should protect themselves and avoid, as far as possible, the discharges from the lungs, the phlegm and other matter from the mouth and nostrils, and the breath of persons suffering from this disease. They are the chief carriers of the infection, and, as in diphtheria, all expectorated matter should at once be burned and not

allowed to soil carpets and clothing and find its way at last into the air.

**Mumps and Chicken-pox** rarely require any active treatment. Keep the patient indoors, and if the fever run high put him to bed and give a dose of castor-oil at bedtime. In mumps, apply a flannel bandage over the head and under the chin to the swellings, and rub (very gently) a little camphorated oil into the swellings. *Strong liniments are hurtful.* A hop pillow is most comforting. The danger in both complaints is from exposure to draughts, cold, and damp.

**Convulsions in Infants.**—Place the little sufferer in a hot bath for five minutes, and if the head be hot apply a towel dipped in cold water to it; then give (gently and without force) an injection of hot water, about half a pint. If this fail to clear out the bowels, repeat it in ten minutes or less. Then place the patient in bed. The causes of convulsions in infants are many: some very simple, others most serious, requiring experienced skill in their management. Indigestion and worms are among the most common and simple causes. Convulsions often occur in the beginning of the fevers of childhood—such as measles.

**Hiccough** is common amongst infants and young children and rarely requires any treatment. If it should become troublesome tickle the inside of the nose with a feather, or insert a small particle of snuff; sneezing nearly always cures it. Its most common causes in children are indigestion and overeating—overloading the stomach with insufficiently masticated food.



In fevers and certain exhausting diseases persistent hiccough is a very grave symptom.

**Teething.**—Remember that this is a natural process and rarely requires meddling. All that is required to be done, as a rule, is to see that the child has proper food and that the bowels and stomach are in order.

**Simple Diarrhœa** in children requires little medical treatment further than to confine the child to milk diet and give a small dose of castor-oil at bedtime. If this fail, and especially if vomiting sets in, active treatment is necessary. Violent vomiting with diarrhœa (*infantile cholera*) is a most serious disease and requires prompt medical aid.

When a child suffering from diarrhœa becomes pale and cold, with frequent attempts to vomit and perhaps hiccough, try the juice of raw beef and brandy. (Beef-juice is made by pressing in a lemon-squeezer or by wringing in a piece of coarse linen very small pieces of fresh raw beef, without fat.) The juice is caught in a cup and a small teaspoonful lightly flavored with salt is given every hour or two, according to effect. This will often remain on the stomach when all other foods are rejected. In extreme cases add five to fifteen drops of brandy, according to age.

**Common Colds.**—Put the child to bed early, give a drink of hot lemonade, and soak the feet in hot water. Six grains of quinine will often cut short a cold in *grown persons*, if taken in the beginning. If there is a feeling of tightness about the chest, apply a piece of flannel sprinkled with turpentine until the skin becomes hot. Do not keep it on long



enough to blister, but rather re-apply it when the feeling of heat passes off. An excellent application for common colds in children is camphorated oil; rub it well into the neck and upper part of the chest, and apply a piece of flannel. Another remedy is a drop of spirits of camphor on a piece of sugar, taken every half hour until eight or ten doses have been taken. A child of three or four years of age may take half the quantity; break the piece of sugar in two. It is a good plan to remain within doors. *Always bear in mind* that pneumonia, pleurisy and other inflammations often begin with symptoms of a common cold, and that *sore throat* in children should always be regarded with suspicion. "An ounce of prevention is worth a pound of cure."

**Worms.**—Take a child with worms to a doctor.

**In Stoppage of Urine in Children,** place the child sitting in hot water and gently rub and press the bowels, or apply cloths wrung out of hot water to the bowels. *Do not neglect this trouble.*

**Costiveness or Constipation in Children** should be treated chiefly by a proper regulation of diet, and not by medicine. The addition of a small quantity of oatmeal to the food is useful; a teaspoonful to a tablespoonful of well made gruel to half a pint of milk, or to a mixture of equal parts of milk and barley-water. The old-fashioned remedy of passing a small, smooth piece of soap into the passage daily is at least to be preferred to costiveness and frequent purges. Glycerine suppositories for this purpose may be procured at the druggists. Castile soap should always be used, *and at the same hour*—about one hour after the morning

meal. Rubbing the bowels is also good; if properly done, no pain is produced.

**Rupture.**—When a rupture occurs suddenly, place the person on his back, draw up the knees, loosen all clothing, apply cloths wrung out of hot water to the rupture and by gentle pressure try to reduce it. *All force must be avoided.* If these fail after a few minutes' effort, send for a surgeon. A proper fitting truss should always be worn in rupture, no matter how small it may be. A small rupture is generally more dangerous than a large one.

**Chilblain.**—If the skin is not broken, rub with compound soap liniment or paint with tincture of iodine. If the skin is broken or chafed, apply Friar's Balsam for a few minutes, then dress once a day with resinous ointment. Persons subject to chilblains may often prevent them by rubbing the parts night and morning with strong whisky. Always rub from the tips of the fingers and points of the toes *upward*.

**Chapped Nipples.** — Sprinkle freely with oxide of zinc or magnesia immediately after nursing, and wash off gently before the child nurses. This is better than ointments.

**Scalds or Eruptions about the Buttocks of Infants.**—These are very common and painful. Change the napkin often and bathe the parts gently each time with bran-water containing half a small teaspoonful—a few grains—of carbonate of soda or powdered borax to a quart of the water. Always dry thoroughly with a soft towel—gently, no rubbing, no soap. Sometimes a powder is useful at bedtime. The best powder is this: Seven parts

of finely powdered starch and one part of magnesia intimately mixed. Sometimes scalding is caused by derangement of the stomach or bowels, which should be attended to.

**Hives** are the result of various causes—derangement of the stomach, improper food, irritating clothing, and so on. The cause must be sought for and removed. A bran-bath at bedtime relieves the heat and itching. See “Bran-bath.”

**Teach Children** from the beginning to keep their teeth clean ; to chew their food thoroughly and slowly ; to obey the calls of nature promptly, and to complete the operations without haste ; to go to sleep on the right side, breathe through their nostrils, and keep their mouths shut. These rules are important, and if faithfully observed may save a lot of trouble in after life.

**Infection.**—Children should not be exposed to infectious diseases if it can be avoided. It is a mistake to suppose that children should have measles and scarlet fever and mumps and so on. It is not necessary. There is a decided objection to their having anything of the sort. As a rule a person who has suffered from one of the common infectious diseases—say measles—is not liable to a second attack of the same disease, but exceptions are by no means rare, and a second attack of measles, scarlet-fever, small-pox, typhoid, typhus, and diseases of a like character occasionally occur. It is necessary to bear this in mind and avoid reckless exposure to contagion.

**“Cleanliness is next to Godliness.”**—Cleanliness in eating and drinking, in sleeping, of

the air, water and clothing, and in the performance of all the functions of life, should always be observed. Although it is beyond the scope of this little work to attempt to teach morality directly, it may be observed that cleanliness of thought and mind are equally important and necessary for the maintenance and enjoyment of perfect health.

The temperate, healthy and clean liver is not only much less likely to be attacked by cholera and other similar diseases which may prevail than the intemperate and debauched, but he stands a much better chance of recovery if he is attacked.

**Drinks.**—When a person is in a high fever, give cooling drinks (there is nothing better than cold water) and make cool applications to the head and skin. When a person is pale and cold, give warm drinks—tea, coffee, ginger tea—and make warm applications to the body—hot bottles to the feet, thighs and arm-pits, gentle rubbing with the warm hand. *Be careful* not to carry either plan to extremes; do not cause chills in the hot patient or fever in the cold one.

**Do not give a Sick and Feverish Child** more water in a cup or tumbler than you intend him to drink. It is cruel to take away the vessel before he has finished the draught.

**A Tumbler of Cold Water** (not iced) is an excellent thing taken some time before breakfast in the morning. It washes out the stomach, prepares it for food, and tends to regulate the bowels.

**Too Much Medicine.**—The quantity of drugs consumed by the public in the present day is enormous and causes much trouble and derange-

ment of health. There is no excuse for this pernicious habit. The educated physician is within the reach of the poorest. Patent medicines of all sorts are especially to be eschewed. Many of them contain opium in some form and are most pernicious—markedly so in the case of young children; not only producing various temporary disorders, but tending to lay the foundation of the terrible opium habit. Very few excuses exist at the present time for the resort of anyone to the use of patent medicines. All medicines, commonly so called, are likely to, or at all events capable of, producing injurious effects when given by the ignorant. It has been well said “that everyone who *needs* a dose of salts or of senna should send for a doctor.”

**Danger.**—Liquid lye, poisons of all sorts and lucifer matches should be kept out of the reach of young children. Large numbers of children are destroyed every year by neglecting this precaution.

Young children should not be locked in a room or dwelling in which there is a fire, or any means of kindling one, within reach.

Kerosene lamps should never be carried about by children when lighted. If they happen to fall, the chances are that they either explode or set fire to the oil, and dreadful burns or death is the consequence. Numbers of persons perish every year from this accident. A lamp which is almost empty of oil is more apt to explode than a full one.

Never under any consideration light a fire in a stove, or any place else, by means of kerosene.

Graniteware is the proper material for kitchen utensils. The food is in danger of being poisoned by the use of lead or copper saucepans or dishes.

**Exercise in Open Air.**—An hour's romp in the open fields is worth more to a child than a day in an indoor gymnasium. The latter, however, is a substitute which cannot be despised.

**Round Shoulders.**—Balancing and carrying light weights on the head, such as books, with the shoulders thrown back, will do more to straighten a child disposed to stoop or become round shouldered or crooked backed, than any of the fancy appliances. Do not mistake this habit for actual disease of the spine (backbone); the latter requires skillful surgical treatment.

**Chew Your Food** thoroughly and leisurely; it is not wasted time. Bolting the food is one of the most common causes of indigestion.

**Learn to Use Both Hands.**—Children should be encouraged to use both hands (the right and the left) equally. The advantage of this training will be gratefully recognized in after life, no matter what the occupation may be.

**Ventilation.**—The best ventilator for an ordinary room is an open fire place or fire. If the room has but one window, open the window at top and bottom, the size of the opening depending, of course, on the season and weather. If two windows, open one at the top and the other below. The door may also be used if it opens into the outside air. The object is to change the air of the room without creating a draft while the room is occupied. Fresh air, especially in sickness, is most important. At the same time, one may as well be poisoned by bad warm air as frozen to death by good cold air. Use common sense and judgment.

*Bad Air and Overcrowded Rooms* kill large numbers of persons, especially children, yearly.

Always keep a vessel of water on a hot stove. It prevents the air from becoming dry, harsh and unpleasant.

**Feeding of Infants.**—Many infants unfortunately have to be spoon or bottle fed; when this is necessary, the milk of the cow is substituted for the mother's milk. If the milk is fresh from a healthy cow, all that is required is that it should be cleanly and properly strained, and then diluted, two parts of boiled water and a pinch of sugar (always use water that has just been boiled) to one of milk.

**Nursing Bottles** should have no rubber tubes or fixings about them; all that is required is a plain glass bottle made for the purpose and a rubber nipple. Rubber tubes cannot be kept perfectly clean, and it is necessary that the bottle and nipple be thoroughly washed and cleaned. Clean the bottle and the nipple with a solution of washing soda.

**Infant Foods.**—If the milk has been kept for some hours, it should be brought to the boiling point in a saucepan before being used (*see that it is not scorched*), or a covered jar or bottle containing the milk may be placed in boiling water for fifteen minutes. If the milk curdles on the child's stomach, add two tablespoonfuls of lime water to each half pint of milk, or dilute the milk with barley water instead of plain water. In delicate infants a small quantity of cream added to the milk is of great use. The quantity of water added to the milk should be gradually lessened as the child grows. At the age of about seven or eight months other food may



be taken in addition to the milk, and there is nothing better than the flour ball (see page 48); it is handy, cheap and nourishing. Another food is oatmeal. Add a tablespoonful of *finely ground* oatmeal to a pint of water, boil for fifteen minutes, then add an equal quantity of milk while the oatmeal is yet boiling. After ten months the child may have a small portion of any plain, wholesome food, but even yet the main diet should consist of milk, bread and milk, or rice and milk. Weak infants require to be fed oftener than strong, healthy ones, because they usually take less at a time. Infants often like a drink of water between meals, and it is good for them.

**Never Wean an Infant** in the hot weather if it can be avoided. Bowel troubles are sure to follow if you do.

A child should not be taught to walk; let him creep until he feels disposed to stand erect of his own accord. Too early walking often causes bow-legs.

**A Woman Suffering from Consumption**, or syphilis, or cancer, or any other serious constitutional disease, should never nurse her infant. To do so would be dangerous to the infant and injurious to the mother. For a similar reason the *milk of diseased cattle should never* be used for food.

**Sleep.**—For the first few months about eighteen hours of sleep daily are required, and for many months at least twelve hours.

Never try to frighten a child into sleep by threats, or ghost stories, or frightful pictures or figures.

**Never use Opium**, or sleeping draughts of any kind, except under the guidance of a physician. Never use patent soothing syrups.



**Sleeplessness in Infants** is often caused by tight and ill-fitting clothing, or unevenness of the bed or pillows, or uncomfortable position, or a pin out of place. *Always use safety pins to fasten an infant's clothing.* When the sleeplessness is the result of disease, it requires prompt medical attention.

Sleeplessness in grown persons, if persistent, requires careful management—in ordinary cases attention to the general health, bedding, air of the bed-room, removal of indigestion, exercise in the open air, a cup of hot beef-tea or gruel at bedtime will effect a cure. Close application of the mind should be discontinued.

**Washing Infant.**—Wash an infant every morning, from head to foot, in lukewarm water, and change the underclothes at least twice a day, airing those taken off before the fire or in the sun. It is a mistake to use cold water to wash an infant. It is unpleasant and often shocks, and does not “harden.” It is often dangerous in the weak and delicate.

**Cotton-wool**, covered with oiled silk or water-proof tissue, is to be preferred to poultices in inflammation of the chest and bowels. The cotton is lighter, does not become cold, is changed less often and with less disturbance to the patients, and does not wet the clothing. The use of poultices to the chest requires careful management and experience, or they are worse than useless.

**The Hot Foot Bath** is most useful in certain forms of headache, with flushed face and throbbing; in croup, convulsions in children, colds; and after prolonged exertion, to relieve fatigue and procure sleep.

But to secure all the benefits of a foot bath it must be taken in the proper way, which is rarely done. It should be taken when undressed for bed, and at the side of the bed. The water should be as hot as can be comfortably borne, and reach half way to the knees. The heat should be kept up by adding hot water when necessary. After from five to fifteen minutes, according to the sensations of the bather, the feet should be *quickly* rubbed with a soft towel, rolled in warm flannel or blanket and placed in bed. The shorter the time they are exposed to the air after removal from the hot water the better. Of course, if it is simply intended to wash the feet, that is a different matter. *A hot bath* for the whole body should be used much in the same manner.

When a child is sick and feverish in the evening, with flushed face, bright eyes and irritable temper, restless and wakeful, or, what is worse, stupid and dull, bathe his feet in hot water, put him to bed and give him a small dose of castor-oil. He will probably be better in the morning, or, coming down with one of the fevers, his position to battle with it will be much improved.

**Vaccination.**—A healthy child should be vaccinated about the third month, or even earlier if small-pox prevail in the neighborhood. There is no danger whatever in vaccination if properly and skillfully done. As a rule, “animal virus” should be preferred. *A second* vaccination at the age of sixteen or seventeen years is advisable. Age does not exempt one from small-pox; the unprotected nursing infant and the man of seventy are equally liable to the disease. Therefore, in epidemics vaccination is always in order.

**In giving Ammonia** (hartshorn) to smell to sick people, see that it is not too strong. Inflammation of the nose and throat is sometimes caused by inhaling the fumes of strong ammonia. Better drop it on a handkerchief than apply the bottle direct to the nose.

**Care of the Hair and Scalp.**—Do not crop the hair close to the scalp. The hair protects the head from heat in summer and cold in winter. Brush it well night and morning, and wash it once a week in summer and once a fortnight in winter.

Let children run bareheaded, except in extreme heat and cold, and there will be less baldness.

**Ringworm of the Scalp** is often troublesome and obstinate. Paint it night and morning for two or three days, or until the skin becomes tender, with tincture of iodine. *It is infectious.* Ringworm on other parts of the body is quickly cured by painting with iodine.

**The Teeth** should be thoroughly cleaned at least every morning, and the mouth rinsed out after each meal. Do not remove the first teeth of children until perfectly loose. They protect the new ones below them.

**The Nails.**—Cut the nails of the toes directly across, and not too close to the quick. Do not round off the corners and you will be less likely to suffer from ingrowing nails—a most painful and obstinate trouble.

**After a Fall** or injury, a child should be allowed to sleep—it is nature's restorer—and not foolishly kept awake, as is sometimes done.

**Sunlight and Fresh Air** are indispensable to perfect health. They are nature's great medicines. Children born and bred in dark and close alleys are often delicate and scrofulous; only the strongest survive childhood and maintain even moderate health and strength.

Patients in hospitals recover more rapidly on sunny sides of the building than on the shady side. It is important, therefore, that growing children should have all the sun and fresh air within their reach. *Judgment and common sense* are as necessary here as in the consideration of every other matter upon which this little book treats. (See Ventilation.)

**Wet Feet and Clothing.**—There is little danger from wet clothes so long as one is taking active exercise and feels warm; it is when sitting still and feeling chilly that the danger comes in. It is time then either to renew the exercise, or rub your skin thoroughly and put on dry clothing. A cup of hot tea or coffee is valuable.

**Suddenly Checked Perspiration** is one of the commonest causes of rheumatic fever, pneumonia and some other dangerous diseases. Avoid, therefore, cold draughts and cold seats when perspiring freely. Do not remove the clothing too quickly. Nevertheless, a healthy person in a glow of heat, if not suffering from fatigue, and if the heart is not thumping against the ribs, may safely plunge into the sea, or hastily take a cold sponge bath. Let both be done rapidly, and followed by a good rubbing with a rough towel, and the result will be found to be most refreshing. It is during the cooling off process when the body is rapidly parting

with its heat that exposure to cold becomes dangerous. *A sense of chilliness* is always a sure warning sign.

**Tight Clothing** of any sort is injurious. Avoid tight shirt collars and tight bands about the neck; they interfere with the circulation of the blood in the brain and have induced apoplexy.

Sponging the neck and throat with cold water every morning, and going without mufflers and "comforters" are good practices.

Fur jackets and coats worn when walking about are responsible for any number of aches and colds. They should rarely be worn except when riding.

In cold and temperate climates woollen under-clothing is to be preferred all the year round. It should be thin and loosely woven, so as not to interfere with the functions of the skin.

Thick-soled boots are to be preferred to rubbers in rough weather, except, perhaps, when snow is on the ground. Rubbers should never be worn indoors or longer than is absolutely necessary.

The general rule to be observed as to the quantity of clothing worn is this: Study to feel comfortable—neither too hot nor too cold. If you feel chilly, you either require a brisk walk or another coat; if you feel hot, remove some of your clothing. A great deal is the result of habit. One man requires more clothing than another under the same circumstances. Old and feeble persons and young children require to be more warmly clad than others. Keep the feet warm and the head cool.

**Disinfection and Disinfectants.**—*Sunshine and fresh air* are nature's disinfectants, and there is no perfect substitute for them; but, as they

are not always available, and in order to save time and for the sake of convenience, certain chemicals are also used. Perhaps the best all-round disinfectant for household use is carbolic acid. It does not injure or stain clothing when properly used. For disinfecting purposes add two tablespoonfuls of the acid to one gallon of water, and mix well. Infected clothing may be soaked well in this mixture until it can be washed. Remember that pure carbolic acid is a powerful poison, and that it burns the skin if dropped upon it. Boiling the clothing is also a good way of destroying infection.

The motions from the bowels in certain diseases—notably, cholera and typhoid fever—should be disinfected before throwing into the closet or elsewhere. The poisons of the two diseases above mentioned are carried to great distances by the water and spread in every direction. *Milk is often polluted* by them and becomes a carrier of disease. For disinfecting motions and other discharges, green copperas (sulphate of iron) is very good. Add one pound (three or four handfuls) of the copperas to a gallon of water and dissolve; of this a cupful (about half a pint) may be added to each motion. It is also good to pour a little into the closet night and morning, or a handful of the copperas itself may be dropped in.

Clothing must not be placed in a copperas solution. It will iron-mold them.

None of these things should be allowed to take the place of the utmost cleanliness.

To clean sinks and remove the grease which collects in the pipes, pour into them a small bucketful of boiling water into which a handful or two of washing soda has been dissolved.

Condy's Solution is an excellent disinfectant, but it is comparatively expensive and stains linen.

Feather-beds and pillows and hair mattresses can only be properly disinfected by steam or heat in ovens or compartments specially constructed for the purpose. Beds made of straw or similar material should be burned after being used in infectious diseases.

The room itself should be fumigated as soon as the patient leaves it: this is done by burning sulphur. Close up every crevice in the room, even the keyholes, by pasting paper over them or stuffing it into them. Then place the sulphur, broken into small pieces, in a dish, and the dish itself resting on a brick in a tub or vessel of water to prevent danger of fire. Then set fire to the sulphur, first sprinkling it with alcohol to hasten the lighting, and leave the room, closing the door carefully behind you. The room should be kept closed for ten or twelve hours and afterward well ventilated. In most cities and towns the health officers see to the fumigation of rooms and dwellings, have the proper appliances, and can do it much better than private persons. To fumigate properly and effectually with sulphur, steam should be generated at the same time as the fumes.

**Food and Cooking.**—All animal food, especially pork, should be well cooked to the bone, so that if the flesh contain the germs or eggs of tape-worm, or other parasites they will be destroyed by the heat.

To roast a joint, place it in a very hot oven for a few minutes to begin with, so as to form a crust or skin on the outside, and prevent the escape of the juices and gravy: afterward let the heat be moder-



ate—about fifteen minutes to each pound of meat is the usual time allowed for cooking.

In boiling a joint, plunge it into boiling water for the same reason that you place a roast in a very hot oven. On the other hand, *to make soup*, place the meat in cold water and let it slowly come to the boiling point. The object is to obtain from the meat all the juices and soluble parts.

All *sausages* should be thoroughly cooked.

Dried and highly seasoned meats are not suitable food for children.

*Meat once a day* is sufficient during the hot weather—especially for children.

Onions are a wholesome and nourishing vegetable, and when properly stewed are not indigestible.

Oatmeal porridge and milk, bread and milk, crushed wheat, rice, barley meal, peas, indian meal, are all wholesome and nutritious articles of diet and, with a little fruit or tomatoes in season or lettuce, and an occasional fresh egg “soft boiled,” should constitute the chief food of children, rich or poor. Perhaps porridge and milk is the chief standby, but a little change is pleasant and advisable. Heavy cakes, sweets and pastry are to be avoided, or rather used sparingly or on particular occasions. A child’s life should not be made miserable by constant denials.

A small quantity of fluid should be taken with meals, but a cup of tea or coffee or a tumbler of water after a meal is good.

As a rule people do not drink sufficient water. When perspiring freely, a larger quantity is required than at other times.

People require a larger quantity of animal and solid food in cold than in hot weather.



*Beef Tea.*—Take a pound of good fresh lean beef, cut into small pieces—the smaller the better, place in a preserve jar with a pint of cold water, cover the top loosely, then place the jar in a vessel of cold water on the stove, bring slowly to the boiling point and let it simmer for an hour. Strain through some coarse material and squeeze everything out of the beef. Remove any floating fat, and flavor to taste.

Although beef tea contains very little actual nourishment, it is an excellent article of diet in sickness when properly used. As recovery progresses, half a dozen of small fresh oysters with their juice may be added, three or four minutes before removing from the stove.

*Barley Water.*—Put a tablespoonful of well washed barley into a quart of cold water and quickly boil down to a pint—strain through a coarse cloth. This is an excellent addition to the milk for infants when it “curdles on the stomach.”

*Rice Water* is made in the same way, and it is to be preferred to barley water when diarrhoea is present.

*Lime Water* is prepared in the following manner: Add to a quart of clean cold water in a glass or crockery vessel (not metal) a piece of quicklime about the size of a small almond—or a small teaspoonful of recently slacked lime may be used. Stir for some minutes with a wooden spoon, then allow to settle. The clear colorless water is “lime water.” *It must not contain a particle of visible lime.* Pour it off and keep in a well-corked bottle. All druggists keep it.

*Egg and Milk.*—Beat with a fork the white of a fresh egg into a froth, then add a small teaspoonful of sugar and half a pint of fresh milk, and stir well; lastly, while stirring, add two teaspoonfuls of brandy or whisky. This is a most excellent and digestible food in the wasting diseases of young children. Every delicate infant of a few months old may take it in small quantities with benefit. It is especially useful in certain forms of diarrhoea, and may be diluted with rice water.

*Flour Ball.*—Tie up tightly in a piece of clean cotton or pudding-bag a pound or so of wheaten flour—unbolted is to be preferred—and boil it for ten hours in a saucepan of water. When cold, remove the cloth and peel off the skin which has formed. A hard, dry solid ball is left, which may be grated for use. A tablespoonful made into a paste with cold water is added to a half pint of milk, and brought to the boiling point. See that there is no scorching. This furnishes a most nourishing food for infants of over seven months.

Milk for household use should be kept in covered glass jars or bottles, in a cool place, out of the sunshine and away from decaying vegetables and smells.

Cream and cod-liver oil are valuable additions to the diet of delicate children during cold weather: and fresh buttermilk is equally valuable in summer.

*Flaxseed Tea.*—Pour a pint of boiling water on half an ounce of linseed and allow it to simmer gently for ten minutes, then strain and sweeten to taste with liquorice. A small amount of lemon-

juice may also be added. A cupful at bedtime is good in feverish colds and in certain simple derangements of the kidneys.

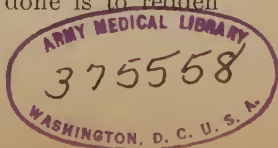
**Linseed or Flaxseed Poultices.**—Thicken boiling water with linseed meal slowly stirred into the consistence of porridge, then simmer for three or four minutes. Apply between two layers of thin cotton or cheese-cloth and cover well with some woolen material. Should be changed often and never allowed to become cold.

**Bread and Milk Poultices** are not recommended to be applied where the skin is broken. The milk soon becomes changed and sour and a source of irritation.

**Mustard Poultice.**—Mix the mustard with *cold* water (not vinegar) to about the consistence of that used at table (a little thicker), and apply between two folds of cambric or thin cotton. This is a valuable application in pains of the chest and bowels, and in simple obstinate vomiting. A mustard poultice will often relieve vomiting when applied to the pit of the stomach. Be careful not to blister: an obstinate sore may be the result. Raise the edge of the plaster every two or three minutes and remove it as soon as the skin becomes red; then apply a piece of soft cotton.

A mustard poultice applied to the pit of the stomach, when in bed, will often induce sleep in grown persons.

**Spirits of Turpentine** sprinkled on dry flannel and applied to the throat and chest in colds, and to the bowels in pains, is also a valuable application. All that requires to be done is to redden



the skin and produce a feeling of heat: do not blister. It may be reapplied if necessary, as soon as the redness and heat pass off.

**Bran Bath.**—Make a bag of coarse cambric about a foot long and eight inches wide—exact size not important—fill with bran and knead in a few gallons of hot water until all the floury part of the bran has escaped into the water which will become like milk; then dissolve in it a tablespoonful of carbonate of soda. This bath, used hot, is very soothing in hives, the eruption caused by poison ivy or vine and other similar irritations of the skin.

**Tea and Coffee**, when taken in moderation, are excellent articles of diet. They relieve fatigue, and enable a person on a pinch to undergo unusual exercise of both mind and body. They are also useful in certain wasting diseases by supporting the flagging strength and energies for a time. They should always be fresh made for use, and not kept simmering on the stove. Their excessive use or abuse is productive of indigestion, headache, and various disorders of the nerves.

In swampy places, or if fevers be prevalent, when one is obliged to go into the open air before breakfast, a cup of tea and a mouthful of bread before going out are an excellent preservative, and may ward off sickness. Tea taken at bedtime often causes sleeplessness and restlessness. Taken early in the morning, after a sleepless and restless night, a cup of good fresh tea will often cause sleep and rest, in cases, of course, where no tea has been taken on the previous night.

Tea and coffee should not be used as a daily beverage by children, or by nervous and bloodless

persons, but regarded rather as medicines, and prescribed with the same care and discrimination.

**Alcoholic Spirits** should never be used except as a medicine by the advice of a physician. They are productive of more disease and suffering, of both mind and body, than any other single cause.

**Tobacco**, if used at all, should not be indulged in by the young and growing ; it stunts the growth, dulls the mind, and is apt to lay the foundation of disease. Its use is especially objectionable in weak and nervous persons.





## WEIGHTS AND MEASURES.

### SOLIDS.

20 grains .....	1 scruple.
3 scruples .....	1 drachm.
8 drachms .....	1 ounce.

### LIQUIDS.

60 minims (drops) .....	1 drachm.
8 drachms .....	1 ounce.
16 ounces .....	1 pint.

### FRENCH.

1 gramme .....	15 grains.
1 liter .....	2 pints.
1 meter .....	39 inches.

Fractions are disregarded.

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A teaspoonful is said to contain 1 drachm (liquid).

A dessertspoonful, 2 drachms.

A tablespoonful, 4 drachms, or half an ounce.

A wine glass, 2 ounces.

A cup, 4 ounces.

But, as cups and spoons and glasses vary greatly in capacity, fluid medicines should always be given from graduated glass measures.

A drop is less than a minim, and varies in size according to the nature of the fluid dropped; but, in the ordinary household administration of medicine, a drop may be taken to represent a minim.



## POISONING.

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**In all Cases of Poisoning**, or even suspected poisoning, send for the nearest doctor without delay. Tell him what has happened, as clearly as possible, so that he may fetch his stomach-pump, antidotes and remedies. But it is well to know what to do until his arrival; time is of the utmost importance.

Bottles and packages containing poisons should always be plainly labeled with their names and uses. They should be kept by themselves well away from other bottles and packages and beyond the reach of children. Lastly, *do not keep them at all* except while in actual use.

**A Few General Rules for Guidance in Poisoning.**—The first thing to be done is to empty the stomach; get rid of the poison; induce vomiting. This may often be done by tickling the back of the throat with the finger or a feather. Do this while an emetic (vomit) is being prepared. If vomiting has already set in, encourage it by giving draughts of lukewarm water (not hot or cold).

The two most generally useful emetics are *mustard* and *common table salt*, one of which may be found in every house.

*Mustard emetic:* Mix a tablespoonful of common mustard powder into a paste with a little water;

then stir it into a tumbler of lukewarm water—about half a pint. Of this about one-quarter may be taken at a time (with a child a tablespoonful will be sufficient) until vomiting takes place, when it should be encouraged by draughts of lukewarm water every two or three minutes.

*Emetic of common salt* is made in exactly the same way, only that the salt is at once added to the water without previously mixing. It is also to be used in exactly the same manner.

In poisoning with powerful acids—such as oil of vitriol (sulphuric acid), or aqua fortis (nitric acid), or powerful alkalies, such as concentrated lye (potash)—emetics are rarely needed. These poisons seldom or ever reach the stomach when taken pure, and are treated by the proper antidotes, to be described shortly.

The after treatment of poisoning—that is, when the poison has been removed from the stomach—requires the exercise of skill, experience and judgment, and must be left entirely to the physician. It is most important and complicated, and any attempt to describe it here would be foreign to the scope of this little work. Suffice it to say that, in the case of all irritant poisons (such as strong acids, potash, and so on), the stomach should be allowed to rest as much as possible. The strength is to be supported by the simplest of foods, such as beef juice given in teaspoonful doses. Equal parts of milk and barley water, the white of an egg given uncooked in water, and a teaspoonful now and then of good olive oil. In extreme cases the nourishment must be given by injection into the bowel. Stimulants, if necessary, may be given in the same way.

The following poisons are those most commonly



met with. They are arranged alphabetically for ready reference:

**Acids.**—Strong acids, such as aqua fortis and oil of vitriol and some others, when taken into the mouth pure, destroy everything with which they come in contact, sometimes producing suffocation by the swelling in the throat. When mixed or diluted with water the action is less violent, and they may reach the stomach. In any case give as quickly as possible lime-water, or a little washing-soda dissolved in water, or even soapsuds—whichever is most convenient. Afterward give melted butter, or sweet oil, or whites of raw eggs.

*Emetics are rarely required* in the case of strong acids, and when used unnecessarily, increase the danger and trouble very much.

**Acid, Carbolic and Creosote.**—The antidotes are Epsom and Glauber (horse) salts used freely, one or both, given in water. Afterward drink barley or rice water, or gum Arabic water, plentifully. (Oil is not good until all the poison has been removed.) Cider vinegar is the best application to the skin which has been burned by carbolic acid.

**Acid, Oxalic,** is used in many houses for removing stains, or cleaning copper or brass utensils. It resembles common Epsom salts in appearance and is sometimes taken for it by mistake. The antidote is lime in some form, a teaspoonful of common whitewash, or a couple of pinches of slacked lime in a tumbler of water, or powdered chalk or whiting; whichever is handiest should be given. Plaster of Paris is of little if any use. In a few minutes after giving one or more of these, if vomiting has not

already occurred, give an emetic. Simple lukewarm water and tickling the throat with a feather or finger is much to be preferred to any other emetic in this case, and generally succeeds with a little management. *Salts of sorrel* and *salts of lemon* contain a large percentage of oxalic acid, and poisoning by them requires the same treatment.

**Acid, Prussic.**—The symptoms when prussic acid has been taken begin immediately. They are great failure of strength, cold and clammy skin, fixed eyes, gasping breathing.

Dash hot and then cold water on the head and neck; give brandy or whisky. Inject strong coffee into the bowel. Use artificial respiration. When a large dose is taken, death is almost instantaneous. Peach nuts and bitter almonds contain prussic acid, and if taken in quantities would produce symptoms of poisoning; here there is time to give emetics (mustard) and they should be used freely. When the pure acid is used there is no time for emetics. Whatever is done must be done on the moment.

**Aconite** (monkshood, wolfsbane) has lately become a common household medicine: hence the frequency of accidents. It is sometimes used in liniments and is a powerful poison. Symptoms: Great weakness; tingling of the mouth and throat; numbness of the limbs; pulse and breathing very weak; mind generally clear. *Treatment:* Give an emetic of mustard (see page 53); tickle the back of the throat with a feather. When vomiting begins, give draughts of warm water, or white of egg and water, or milk and water, to encourage it. Apply hot water bottles to the feet and legs, or mustard poultices. If the breathing is about to cease, use

artificial respiration (see page 17) and injections of hot water and brandy into the bowel. After the vomiting keep the patient lying flat; do not raise him.

*Foxglove* (*digitalis*) and *deadly nightshade* (*belladonna*), *thorn-apple* (*stramonium*), and *hemlock* (*conium*), when taken in poisonous quantities, produce in a general way symptoms similar to those produced by aconite, and the treatment, which is substantially the same, need not again be described.

These plants are sometimes cultivated in gardens and grow wild, and children are poisoned by chewing or eating the seeds or other parts of the plant.

**Alcohol.**—Sometimes children are given or take of themselves draughts of whisky or other spirits until insensible. Empty the stomach as soon as possible by passing a feather or the finger to the root of the tongue, then dash cold water on the head; at the same time apply warmth (hot water bottles or plates) to the feet and legs. In extreme cases artificial respiration (see page 17) may be tried.

**Alkalies.**—The caustic alkalies, such as soda, potash, concentrated lye, quick-lime and strong ammonia, act almost as severely on the mouth and throat when taken as do the strong acids already mentioned, and relief must be prompt. *The antidotes* are acids, such as vinegar, lemon-juice, and sour wine, or anything of that sort that may be at hand; shortly afterward give sweet oil or butter. The after treatment (see page 54) is much the same as for the strong acids.

**Arsenic.**—Paris green and “Rough on Rats” are made up mostly of arsenic. The antidote for poi-

soning with arsenic is the *hydrated oxide of iron*. It should be freshly made, and may be had of any druggist. It may be given freely, and vomiting at the same time encouraged by drinking lukewarm water, or, better still, warm milk and water. Arsenic, when taken in poisonous doses, causes great suffering, generally accompanied with vomiting. It produces violent inflammation in the throat and stomach, with intense pain. If Paris green has been taken, small grains of it may usually be seen about the teeth, or clothing of the neck, and the cause of the trouble be at once recognized. Sometimes preparations of arsenic are used to give the green color to common wall papers. The arsenic from the paper finds its way into the air of the room or dwelling, is breathed, and produces various distressing symptoms and impaired general health—therefore, beware of green wall paper; also of cheap articles of green underclothing.

**Camphor**, when taken in large doses, causes insensibility and other alarming symptoms. Give a mustard emetic, and, after it has acted freely, hot coffee.

**Chloral**, often given in sleeping draughts, is a powerful poison when taken in large quantities. The symptoms of an overdose are generally failure of all the functions and profound insensibility, cold, clammy skin and relaxed muscles. The treatment is to empty the stomach by means of mustard emetic, apply warmth to the surface of the body, dash cold water on the face and head. Use artificial respiration and stimulating injections of hot coffee and brandy.

**Chloroform**.—When an overdose of chloro-

form has been *inhaled* (breathed)—turn the person head downward for a minute or two, give plenty of fresh air, and use artificial respiration until the doctor comes. When the chloroform has been *drunk*, use the same treatment, and give, if possible, in addition, bicarbonate of soda (baking powder) in water, freely.

**Copper.**—When a person swallows a copper coin, let him alone: it will pass in due time. Blue vitriol (sulphate of copper) produces violent vomiting, pain and distress. Give the white of raw eggs mixed with warm (not hot) water, or flour and water, and encourage the vomiting until all the green matter disappears. Sometimes slow poisoning is induced by using unclean copper vessels in cooking, or making jams and pickles. Where copper vessels are used in the preparation of any sort of food they should be kept scrupulously clean. Food should never be allowed to remain in copper vessels.

**Corrosive Sublimate.**—The antidote for this and other soluble salts of mercury is the whites of raw eggs; after giving the eggs, induce vomiting. Corrosive sublimate is a most powerful irritant poison.

**Gases.**—Certain gases produce poisoning or suffocation when breathed. Coal gas from stoves; illuminating gas; carbonic acid gas (choke damp) found in brewers' vats, old wells and mines, and in the fumes of charcoal—these are the most common in causing accidents. The symptoms are difficult breathing, partial or complete insensibility, dusky colored skin, sometimes delirium and convulsive movements. The first thing to be done is to loosen all clothing about the neck and chest and get

the patient into the open air. If the weather will not permit of his removal outside, ventilate the room as quickly and thoroughly as possible—*get him away from the gas*. Dash cold water in the face and rub the body with hot flannels. If the breathing has ceased, or is about to cease, use artificial respiration (see page 17). Afterward, hot coffee, rest and plenty of fresh air.

Never take a lighted candle or lamp or even strike a match in a cellar or room in which there is a strong smell of coal gas, or you will likely have an explosion. The place should be thoroughly ventilated and freed from gas before a flame of any sort is allowed to enter.

Never descend into an old unused well or mine shaft or vault without testing it for the presence of choke damp. This is done by lowering a lighted candle to the bottom; if the flame is extinguished the place is most dangerous, and should not be entered until the gas is got rid of in some way. If the quantity be small, dashing in water will generally displace it, or lighted straw may be used, or a current of air forced in by some means. As soon as the lighted candle will burn brightly upon being lowered, there is no longer danger. As long as there is any doubt, or in order to rescue a victim, the person descending should be fastened by a rope about the waist so that he may be quickly removed if necessary. Pure carbonic acid or choke damp produces almost instant death by suffocation.

Observe that the gas generated in badly ventilated sewers or in old privy vaults is sometimes explosive when brought in contact with a flame.

**Iodine.**—The antidote for iodine, or its tincture,

is starch. Mix the starch with lukewarm water, and give to drink freely, at the same time encourage vomiting.

**Lead.**—When sugar of lead is taken in large quantities, it produces violent vomiting, and is generally all discharged. The most convenient antidote is Epsom salts in small doses, given often until they act upon the bowels. Put two ounces of Epsom Salts in a goblet of water and give a tablespoonful every fifteen minutes until the bowels act freely. Slow or chronic lead poisoning is common among persons working in the metal, such as plumbers, shotmakers, and painters. It also sometimes takes place from using water from lead cisterns or pipes; this is rare.

**Opium.**—Laudanum, paregoric and morphine are all preparations of opium. When an overdose of any of these has been taken, empty the stomach as quickly as possible by means of a mustard emetic (see page 53), assisted by tickling the inside of the throat with the finger or a feather, then dash cold water on the face and neck, at the same time apply heat to the other parts of the body. Twenty or thirty drops of aromatic spirits of ammonia in a tablespoonful of water should be given every few minutes until three or four doses have been taken (do not use liquor), and strong freshly made coffee given to drink. Smelling salts or ammonia to smell. Frictions made with hot flannels to the legs and arms, and, lastly, if the breathing is about to cease use artificial respiration. Where the sufferer is not profoundly unconscious he may be made to walk up and down between two persons.

Opium, in any shape, should never be given,



especially to young children, except by the advice of a physician. Beware of so-called soothing syrups for infants: some of them contain opium.

**Phosphorus.**—Children sometimes become poisoned by sucking matches or tasting certain “vermin destroyers.” The antidote is common turpentine. To a child of three years, three drops of turpentine may be given in a teaspoonful of barley water, or gum Arabic water, every fifteen minutes until four doses have been taken. Drink plenty of barley water and encourage vomiting. Afterward lemonade without sugar, and a purge of magnesia. Do not give oil or butter.

**Poisoning by** certain articles taken as **Food** is not uncommon. The principal of these are fish, especially shell fish, out of season, and mushrooms. The treatment is much the same in all. Mustard emetic, draughts of barley water and warm milk and water, or simple water, to encourage vomiting. Afterward give a dose of castor-oil to carry off any of the substance that may have reached the lower bowel. At the same time heat to the surface of the body will be required, and stimulants, such as sal volatile (carbonate of ammonium)—twenty drops—or brandy and coffee.

**Poison Ivy.**—The painful redness, itchiness, and sometimes blistering, caused by exposure to poison ivy and other plants of a similar nature, may often be relieved by daubing (not rubbing) the skin with fresh buttermilk. It may be washed off in the course of a few hours and applied again. If this fail, a wash made of hypo-sulphite of soda—two drachms dissolved in a pint of water—may be tried. The bran bath is useful.



**Strychnine** in poisonous doses produces intense pain and muscular contractions—the body is twisted in all directions and locked-jaw is common. The only thing that can be done by the unskilled onlooker is to support the body as carefully as may be, and try to empty the stomach by one of the plans so often mentioned before.

**Tartar Emetic** or antimony. Children sometimes take an overdose of antimonial wine, which produces violent vomiting and great weakness. The antidote is a strong infusion of green tea freshly made. Careful after treatment is necessary.

**Tobacco**, when taken to excess, especially by the young, either by smoking or otherwise, produces most distressing and alarming symptoms. Even its “*moderate*” use by the young is most harmful. If the tobacco has been taken into the stomach, induce vomiting (mustard emetic), then give hot brandy or whisky and water or sal volatile (carbonate of ammonium), afterward coffee. At the same time use hot application to the body. Sometimes artificial respiration is required. In poisoning with Indian tobacco (*Lobelia*) the treatment should be the same.

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It has been attempted to make the foregoing hints and remarks upon poisoning—a complicated subject—as simple and plain as possible, and all mention of electricity, hypodermic injections, and other complicated treatment, invaluable in the hands of the physician, but beyond the skill and management of the ordinary onlooker, has been omitted.





## GENERAL HOUSEHOLD HYGIENE.

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Hygiene is that department of medicine which is especially concerned in the preservation of health.

In selecting a site upon which to build a dwelling, choose rising ground with a gravelly bottom. Experience and observation have shown that such a situation and foundation are conducive to health in a remarkable degree. Drainage is easily effected, and the ground air is less likely to be contaminated. Chest affections are rarer than in level or low, damp situations, and even consumption itself is less prevalent, and more amenable to treatment when it does occur.

The basement or cellar should be floored with concrete or asphalt. It prevents the entrance of ground air, the decay of wood, and other matters in and about a wooden floor, and does not furnish preserves for insects and vermin.

The water-closet should invariably be placed against an outer wall, so as to open directly into the open air by means of a full-sized window or door. It would be an advantage to have it completely cut off from the interior of the dwelling—an arrangement which could be easily effected in warm climates and summer houses.

Let the soil pipe pass directly down the wall and out of the house as soon as possible. Soil and sewer pipes which have to be carried some distance within the dwelling should be so arranged as to admit of a ready examination, in order to guard against the escape of sewer matter or gas. Do not bury them under ground in dwellings.

It is almost needless to remark that comparatively few of us are in a position to observe all the foregoing rules; at the same time it is well to aim at the highest standard of excellence, and thereby enjoy the greatest good within our reach. And I may say, once for all, that this remark applies to many passages in this little work.

Cleanliness in all things—in person, in dwelling, of mind—is the first essential in matters of hygiene. The air is a mixture of two gases—oxygen and nitrogen. Oxygen is the great supporter of life and combustion. Nitrogen acts simply as a diluent. One hundred parts of air contain 20.96 of oxygen and 79.00 of nitrogen, and a small quantity of carbonic acid. There is also a variable quantity of watery vapor and traces of organic matter. This is pure air, and its composition is remarkably uniform throughout the world. Over the ocean and at great altitudes it is free from dust and organic matters in suspension. Over large cities it is polluted by a variety of foreign matter—soot, various gases from factories and other works, respiration and excreta of the multitude, the results of decomposition, and by minute particles both mineral and organic.

**Dust** is one of the greatest causes of impurity of the air in houses. It consists of a great variety of substances, such as soot, wool, cotton, straw, sand,

starch, debris from the skin, and other refuse, in a state of minute pulverization. It also contains living germs of one sort or other, according to situation. These may be perfectly harmless, or be the carriers of disease or infection. They are known by various names: perhaps bacteria is the most inclusive. There are several varieties of them known each to carry a specific disease—the bacteria of typhoid, of erysipelas, of consumption, leprosy, malaria, and others. They are easily destroyed by heat and certain chemicals (germicides), but their seeds (spores) are not so easily got rid of, and possess great vitality. Frost will not kill them, hence the necessity of procuring ice for household use from an unpolluted source.

From the nature and origin of dust it is plainly seen that it may be productive of a low state of the general health, particularly in over-crowded dirty houses. It, however, cannot practically be got rid of, but a great deal may be done to lessen the nuisance by having the floors painted, by the avoidance of close-fitting carpets, heavy curtains and other upholstery, and the substitution of rugs or mats, which may be easily shaken out of doors at frequent intervals, and light muslin curtains easily washed. The coverings of the wall should be smooth, and of a material which admits of being cleaned with a damp cloth—varnished paper, for example. Wall paper of a green color often contains arsenic, which finds its way in some shape into the air, and sometimes produces distressing and even dangerous symptoms.

When without objection on the score of material, it is a good plan to remove dust from furniture, walls and floors with a damp broom or cloth.

Purification of the air is being constantly effected by means of the winds, which sweep away impurities and bring pure air from a distance, and by the rain, which washes the air and in its passage absorbs noxious gases. The action of the oxygen in the air itself, and of the sun's rays, are powerfully purifying. The respiration of plants have, on the whole, a beneficial effect.

The long-continued breathing of vitiated air lowers the vitality of the whole system, and renders persons so affected particularly liable to contract infectious and other diseases to which they may be exposed. They are subject to indigestion and various discomforting feelings. Of workmen, those who live an out-door life—farmers, fishermen and others—are the healthiest and have the lowest death rates. Consumption is much less prevalent among them.

Another source of the vitiation of air is combustion, especially within doors. The gases from the stoves or grates and from the artificial lights charge the air.

The least objectionable artificial light for the dwelling is the electric light: it does not give off gases, and furnishes a pure light. Next comes that furnished by a good petroleum oil; and lastly coal gas and candles.

**Ventilation.**—The object of the ventilation of dwellings is to keep the air therein as pure as possible, by frequent interchange with the outer air, and in ordinary dwellings fairly situated—that is, having an open space about them of reasonable dimensions—ventilation may be accomplished by means of the doors and windows and the exercise

of a little common sense. Every habitable room should have a window or door opening into the external air, and the distance between floor and ceiling should not be less than eight feet. About 1000 cubic feet of space should be allowed for each adult person occupying a sleeping-room. When the difference in temperature between the outer cold air and house warm air is marked, as in winter in northern climates, the cold air rushes in through every crack and cranny—even through a brick wall—to replace the warm air, and ventilation is made easy. A current of fresh cool air rushing into a hot room, producing a draught, is doubtless very pleasant and refreshing; at the same time it is not without certain risks to the inmates—especially to invalids and infants. It may suddenly check perspiration and thereby induce various ailments of the respiratory organs, such as catarrhs, or more serious complaints—also acute rheumatism. As a rule the sensations are the best guide in this matter. If there is the slightest tendency to a sensation of chilliness—sneezing is an unmistakable indication—the sooner the draught is got rid of the better.

The little wheel ventilator is simple, inexpensive and useful, and may readily be fitted to window or door. The difference in temperature between the inner and outer air causes it to revolve, and two currents are established, one passing out and the other in. It has the advantage of not producing any sensible draught.

Various mechanical contrivances for the ventilation of large buildings, public halls and theatres have been devised: some of them are of great value, some are practically useless, and most are compli-

cated and expensive. It is beyond the scope of this work to do more than mention them.

**Heating.**—The principal means of heating buildings are the following: by means of steam, hot water, hot air, open grates and closed stoves. One of the first two is to be preferred in cold climates when obtainable. In moderate climates the open grate is preferable. It not only produces sufficient heat, if properly constructed, but acts as an excellent ventilator. The stove is not without its advantages when skillfully managed. One lined with some preparation of clay, so as to prevent overheating of the external surface and the consequent burning of the floating particles in the air, is recommended. It also serves more or less as a ventilator.

When gas is used for heating purposes, either in stoves or grates, it should be seen to that the products of its combustion are at once carried into the chimney. They are invisible, but most deleterious in their effect when breathed for any length of time. Air in its natural state contains a certain amount of watery vapor—moisture, and this should be borne in mind in any plan of heating. The artificial heat dries the air and renders it more or less irritating to the delicate lining membrane of the air passages, especially in chronic diseases of the lungs and bronchial (air) tubes. Dry air also affects the skin injuriously. Therefore, devise some means of supplying moisture in this heated dwelling. Keep vessels of water on all stoves, or in such situations as are suitable and available when other sources of heat are employed.

Excessive humidity, dampness of the air, lessens the evaporation from the skin and lungs. The air



is unable to contain additional vapor to a degree, and when the temperature is high all the disagreeable effects of heat are thereby intensified. The evaporation of water from the body, which is thus interfered with, is one of the chief means of cooling it.

**Water.**—The rain water which falls in the open country or at sea, away from city and factories, is the purest found in nature. In the neighborhood of cities, it, in its passage through the air, becomes more or less polluted by the absorption of various noxious gases and the admixture of dust. As has been already mentioned, it purifies the air in its descent. It is “soft” (free from salts of lime and magnesia), and especially useful for cooking and washing.

Well water is often apt to become polluted by drainage of surface water, or by the passage through the soil of filthy liquids from the house or adjacent cesspool into the well; and, notwithstanding this, the water may be clear and sparkling, though carrying the fatal germs of typhoid or scarlet fever. Wells, therefore, which are used for the supply of the household should be carefully guarded and all sources of pollution removed to a considerable distance. The water furnished by shallow wells in the neighborhood of stables, or cattle-sheds, or dwellings, can never be safely used for drinking purposes.

Streams and rivers are often polluted by sewer matter or the waste products from mills and factories.

Deep wells, carefully protected by proper lining, and artesian wells, generally furnish sufficiently pure water. Water is effectively purified by distil-

lation. Boiling for about half an hour destroys all organic matter, including the germs of disease, and from its simplicity should be preferred to any other mode of purification. Chemicals cannot be recommended for ordinary use.

Common domestic filters often do more harm than good by retaining in their pores organic matter, which soon putrefies. When used they should be cleaned frequently and the filtering material renewed.

*Remember that filters do not remove the germs of infectious diseases, so that even filtered water, if there be any suspicion, should be boiled also.*

Typhoid fever is more often spread by the medium of water than in any other way. Asiatic cholera, malarious fevers and some other diseases are often traced to polluted drinking water, and so are various parasites—notably, tape-worm.

**Clothing.**—Practically it matters little what material is used for the outer clothing, provided that it is clean and that it admits of the free passage of air. It should, of course, be thick or thin, heavy or light, according to climate and season.

The material used for underclothing is of more importance, and it may be said briefly that in the temperate and cold climates wool is greatly to be preferred, both for summer and winter wear. The woollen fabric should be fine and loosely woven. Thick, closely woven woollen garments are objectionable. By frequent washing they become of the texture of “felt,” and barely admit of the passage of air and moisture through their substance.

To prevent shrinking as far as possible woollens should be washed in tepid (lukewarm) water and not much wrung out. Kerosene or paraffin soap is

said to be the best soap to use. Soaps containing much alkali—soda, or potash—are injurious. -

Occasionally an individual is met with whose skin is so delicate and sensitive that wool cannot be borne in contact with it. In such a case silk might be substituted.

In tropical climates linen and cotton are generally used for underclothing. A special make of the former is recommended; but even here the worker in the open air is better protected by wool. An ideal material for summer underwear is an admixture of silk and fine wool.

Do not wear the same underclothing in bed that is worn in the daytime. Change morning and evening, and have that not in use thoroughly aired in the meantime.

Feather-beds and thick, heavy bed covers are not desirable; a hair mattress and light blankets and coverlids are to be preferred; nor is a good, clean, well-made straw bed to be despised; it has the advantage of cheapness and admits of being frequently changed. Beds not in use should remain as long as convenient uncovered, so that the clothing and mattress may be well aired and freshened. A fair allowance of sleep is as necessary for the maintenance of health as a fair amount of food. About eight hours' sleep out of the twenty-four may be taken as a good average for adults. Something depends upon occupation and original constitution. Then there are the exceptions. As will be seen further on, young children and infants demand a much longer period of rest.

**The Kitchen and Pantry** should be spotlessly clean from pot hole to ceiling. No part of

the dwelling requires more watchfulness and care. Remove at once all animal and vegetable refuse.

“Graniteware” utensils are to be preferred to all others for ordinary use. Copper vessels, through carelessness or inadvertence, may produce very unpleasant symptoms of poisoning, a small quantity of the copper having been dissolved and mixed with the food.

**Cooking.**—All animal food—fish, flesh and fowl—should be thoroughly cooked (not boiled to ribbons or dried up) for several reasons, the chief of which is that all obnoxious organisms or poisonous matter present in the raw meat shall be destroyed by heat. Embryo trichina, tape-worms and other abominations are often communicated to man by means of imperfectly cooked or raw food.

To roast a joint, expose it at first to high heat for a few minutes, then roast or bake at a moderate temperature, the object being to at first form a crust or covering by the coagulation of the albumen at the surface and thereby prevent the escape of the juices during the subsequent cooking. The usual rule is to allow a quarter of an hour for every pound of meat. In boiling a joint, for precisely the same reason, plunge it into boiling water; then cook gently at a lower temperature (about 190° F.); let it “simmer.” On the other hand, in the preparation of soup, place the meat in cold water and heat gradually, as it is desirable to obtain all the soluble parts from the material used.

**Diet.**—It is estimated that a healthy man of medium stature and weight, who takes a moderate amount of exercise, requires about 44 ounces of

solid food daily, say 2 pounds of bread or its equivalent in vegetables, and  $\frac{3}{4}$  pound of meat. This is merely approximate, and the amount and proportion of animal to vegetable diet should vary according to climate and season. In the heat of summer diminish the meat and substitute vegetables and fruit; in extreme cold, fat should be more freely used. As a rule, one meal of animal food daily is sufficient. The other two meals should consist of vegetables—rice, oatmeal, rolled wheat, hominy, seasonable fruit, milk, and so on. Peas, onions and beans are especially rich in nutritive matter. Cheese is highly nutritious, but in many persons difficult of digestion. Eggs are easily digested and contain all the elements necessary for the growth and repair of the body. Sugar, in moderation, to sweeten dishes, is not objectionable. In many cases butter may be beneficially substituted for fat in other forms. Beef tea, even when properly prepared, contains but a minute quantity of nourishment; nevertheless it serves a useful purpose when judiciously administered in certain forms of disease. Unbolted wheat flour is much to be preferred to “extra fine” flour.

The diet of the ploughman, actively engaged in the open air, should be more plentiful and generous than that of the sedentary office clerk.

Ground fruits and vegetables, such as strawberries, lettuce, and tomatoes, should always be washed before being eaten uncooked. They sometimes have their surfaces tainted by the dropping of insects and other animals.

The dietary suitable for the sick is a subject too complicated and extensive to be treated of in these pages. The proper food for infants will be con-

sidered later. Observe, that in times not far gone by, the farm laborers of Scotland—a stalwart and hardy race—lived almost entirely on oatmeal and milk, whilst the agile and wiry Spanish mountaineer thrives on black bread and onions. Many other similar examples might be given of health and strength maintained by the use of the simplest food only.

Pure water is the most suitable beverage for common use. A tumbler of hot or cold water—according to taste and effect—taken upon rising in the morning, before food, is invaluable. It cleanses the stomach and prepares it for the exercise of its function. It also tends to regulate the bowels. A moderate quantity may be taken with the meals; in excess, especially if iced, it retards digestion. Between meals it may be used freely—the quantity depending in a great measure upon the nature of the diet and the amount of exercise and perspiration. It would be an advantage to use it more freely than is generally done.

Tea and coffee are much alike in their action upon the system, and when used in excess give rise to many unpleasant nervous symptoms, headache and indigestion. When of good quality, freshly prepared and used in moderation, they are most refreshing and gentle stimulants, relieve fatigue and sustain the system under unusual mental or physical strain.

Chocolate and cocoa furnish pleasant beverages and contain considerable nutriment. They may be substituted for tea and coffee, if the latter are objectionable from any cause.

Alcoholics should only be used medicinally under the personal direction of a physician.

**Bathing.**—The skin separates and removes from the system a large amount of waste matter. The daily quantity—sometimes amounting to pounds in weight—varies according to degree of exertion, food used, and the temperature of the air. It consists principally of water, certain salts, and a little fat, and is named perspiration. The outer layer of the skin (epidermis) is constantly falling in minute scales and being renewed.

So important is the skin as a purifier of the body that a total arrest of its function would be speedily followed by death.

It follows, therefore, that in order to maintain perfect health, the skin should be kept clean and in good working order from head to foot. This may usually be done by washing daily with tepid water—no soap is required—by means of a sponge or a piece of flannel (the latter is to be preferred) and drying rapidly with a rough towel. A couple of gallons of water are sufficient, and the whole operation need not occupy more than ten minutes at the outside. In addition to this a warm bath should be taken once a week—in this soap should be used. According to the sensations and desire of the bather, cold water may be substituted for the tepid sponge. As a rule, the morning is the proper time for the sponge bath, and the evening for the warm bath.

When all the conditions are favorable, a bath in the sea acts as a most invigorating tonic; but delicate persons, especially females, must observe certain precautions. Do not enter the water immediately after violent exercise, or if a decided feeling of chilliness be present, or shortly after a full meal. The best time for bathing, unless the sunshine be



too powerful, is between 9 and 12 o'clock in the morning—an hour or two after breakfast. The robust and vigorous swimmer often enjoys most his plunge in the early morning.

If on coming from the water a persistent feeling of chilliness is experienced, if the skin and lips are pale, the circulation languid, and a bluish tinge is noticed about the eyes, the bath has proved decidedly injurious and should not be repeated, at all events under the same conditions. If, on the other hand, the skin glows, and all the sensations are buoyant, the bath has proved a success and a benefit. About fifteen minutes is the average time to remain in the water.

The Turkish bath is often of decided benefit in certain diseased conditions, when used by the advice and under the instructions of a physician. In health, it is simply a luxury.





## HYGIENE OF THE NURSERY.

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The Nursery should be well lighted by large windows and situated so as to secure plenty of sunshine. It should not communicate with a bath-room or water-closet. Varnish or paint the floor, and do not tack the carpet down. The walls also should be painted or covered with varnished paper, so as to prevent the lodgment of dust. The furniture should consist of a table or two, several chairs, a chest of drawers to contain clothing and bed linen, and a separate bed *for each individual inhabitant*.

Common crockery jugs and wash-basins are to be preferred to stationary washstands; the latter may allow of sewer gas entering the room. Upholstered furniture and heavy or unnecessary curtains are objectionable. A few colored pictures, such as are issued by the illustrated journals and which may be changed occasionally, may be placed on the walls; they are a source of interest and pleasure to the children. Make the nursery as cheerful-looking and pleasant as possible. The ventilation, heating and lighting of dwellings have already been considered in the first chapter. No simple ventilation equals the old-fashioned hearth and wood fire for the nursery, protected by a properly constructed fender. A sheet of tin pierced by numerous small holes, inserted in the window in the place of a pane of glass,

or the wheel ventilator, may be used, according to the seasons and other considerations. The temperature should be maintained as nearly as may be at 68° F., as indicated by a reliable thermometer, and there is no reason why the room should be cooler at night than in daytime, although a cold bed-room is generally recommended. A cold bed-room necessitates additional clothing and bed covers, which are open to objections, and the advantage is not apparent. A warm, equable atmosphere may be equally pure with a cold one.

Keep a "night light" always at hand; it need not be used except in the event of sickness or unusual wakefulness, and then should be properly placed and shaded, so as not to fix the attention of the child.

It is needless to repeat what has already been said as to the observance of perfect cleanliness in all things. All soiled napkins and bed clothing should be at once removed from the room and washed and boiled. This is imperative in the presence of diarrhoea, from whatever cause, and in all infectious diseases. If the napkins cannot be immediately washed, rinse them and place them in a vessel used for no other purpose, where they may remain until about to be washed, and pour over them the following solution: Water, 1 gallon; carbolic acid, 2 tablespoonfuls (one ounce). Mix thoroughly. (Handle the pure acid carefully; it is a powerful caustic and poison.)

There is no better material for children's beds than fresh, clean, fine straw, or the sheaths of corn finely shredded. See that there is no mustiness, and if the beds are properly made and covered by a double fold of soft blanket, they are elastic and comfortable and are admirably adapted for summer

and hot climates. They can be frequently renewed at a trifling cost ; and, as they are constantly liable to become soiled, this is a marked advantage over hair mattresses. The appearance of the hair mattress is certainly in its favor, and there are other reasons for preferring it which readily suggest themselves. The difficulty is to keep it perfectly clean and pure, and this may be overcome by frequent changing and by the systematic application of steam and heat. The constant use of rubber sheets is inadvisable.

**Infants' Clothing.**—It should be warm and light, bearing in mind the fact that infants and young children are more susceptible to the depressing effect of long continued cold than others, and that tight bands in any situation are injurious. The “binder” which is usually worn for the first two years of life may be of fine loosely woven or, better, knitted wool, and should reach from the hips to the ribs, including the two or three lower ones. It should never be applied tightly, but regarded rather as an article of clothing than a bandage. Fasten with safety pins. Never use a common pin about an infant's clothing. The other articles of clothing must be left to the common sense of the mother or nurse ; suffice it to say that the fewer and simpler they are, the better, always having a due regard to the temperature and the climate. In warm weather, and at most times indoors, a plain flannel gown with long sleeves, and reaching from the lower part of the neck to the feet, with a simple band of soft material around the waist, and a pair of merino socks for the feet, are all that is required in addition to the binder and napkin. This dress admits of the free play of the infant's limbs, development of the muscles and organs, and is also most comfortable.

The exercise of taste in the choice of colors may make it graceful and pretty. Beware of sudden changes of the weather and dress accordingly, adding a shirt now and a petticoat then, according to temperature. The use of leather boots during the first year of life is a positive cruelty. No head covering of any sort should be worn indoors, but in the open air the head should be carefully protected from the direct rays of the sun in summer, and from cold in winter. Except during extreme cold and in northern latitudes, furs are not desirable. From what has already been said here and in the first chapter with regard to clothing, it will be unnecessary to particularize the clothing suitable for children who are able to run about—say after three years of age. The same general rule applies throughout. It may be well, however, to protest against the fashion of sending children out of doors, even in chilly weather, with their legs from the lower part of the thigh to the ankle unprotected—naked. It is at least injudicious, and in the case of delicate children, positively dangerous. Low shoes are much to be preferred to boots for general wear. The former allow of the free motion of the ankle joint and the consequent development of the surrounding muscles and other structures, whilst the latter hamper movement, growth and development to an appreciable extent.

The term infancy may be applied to the first two years of life after birth—that is to say, until the complete eruption (cutting) of the milk teeth, 20 in number. Childhood extends from about two years of age until puberty, which develops at about the age of fifteen. There is considerable variation as to time, but the division is fairly accurate.

The two lower middle teeth (incisors) are the first to appear, between the 5th and 7th months, then the four upper incisors. The eye teeth are "cut" between the 16th and 20th month, and lastly, the farthest molar (grinder) at from the 22d to the 28th month. Rarely children are born with one or more teeth—always incisors—already cut: these almost invariably fall out, and are replaced at the usual time. Sometimes the first teeth appear as early as the fourth month and sometimes are delayed until the 10th or 12th month. The early appearance of the teeth does not denote any departure from health, but often rather the possession of an active and vigorous development, and they are usually cut easily. *It is different when the teeth are long delayed beyond the normal period:* there is something wrong. The infant is improperly fed and assimilation is imperfect, or the food does not contain the necessary elements in the proper proportions for the formation and growth of bone and teeth; the function of general nutrition is tardily performed and the infant has an unwholesome appearance. If the twelfth month passes without the appearance of teeth, a careful examination by a physician is necessary: there is reason to suspect the existence of rickets. Nevertheless the foregoing must be accepted in a general way. Instances of late teething in the infants of closely related families, possessing a high standard of health, sometimes present themselves. It is a family trait. The permanent teeth (32 in number) begin to appear between the 6th and 8th year by the eruption of the two central incisors of the lower jaw. The second dentition—with the exception of the "wisdom teeth"—is usually completed about the fourteenth year. The

wisdom teeth (third molars) are cut from the eighteenth to the twenty-second year.

The cutting of the teeth (dentition) is a natural process and not a disease, and the various disorders—indigestion, diarrhoea and others—which often occur at this period, and which are laid to the charge of teething, are more frequently the result of change in diet, improper feeding, and other indiscretions, rather than solely to dentition. At the same time it must be remembered that all the functions of the infant—nutrition, growth, development—are more active than previously, and consequently the risk of disturbance is greater; therefore strict attention to the general management of the infant should be observed. Attend carefully to the bathing and feeding, to the condition of the skin, stomach and bowels. Dentition may be called one of the critical periods of life, and in this respect resembles somewhat puberty and the menopause, and, like these, it is often attended by pain and discomfort.

**Care of the Teeth.**—A watchful eye should be kept on an infant's teeth from the beginning. The fate of the permanent teeth in some measure depends upon the career of the milk teeth: if the latter are neglected and allowed to decay and fall prematurely, the former suffer. They are protected in a degree, during their delicate and semi-pulpy condition, by their predecessors. Clean the infant's teeth once or twice a day by means of the little finger wrapped in a piece of linen or cotton. A piece of properly shaped wood is recommended instead of the finger, but it is better to rely on the latter: there is less danger of injuring the inside of the cheeks and the delicate gums. After three



years of age a small soft brush may be substituted for the finger. Remove any particles of food that may have become fixed between the teeth, with a quill or splinter of wood: do not use a pin or any metallic substance. If any spot of decay shows itself, or cavity forms, have it at once attended to by the dentist: the cavity should be filled. In short, all the care usually bestowed upon an adult's teeth should be equally observed in the case of the infant and child.

**The Nails.**—The finger nails should be pared regularly, keeping them a *fraction* shorter than the soft parts beneath, so that they may not be caught in the clothing or other matter. Cut the nails of the toes directly across—do not round off the corners. By attention to this rule ingrowing nails—a most painful and obstinate affection—may generally be prevented, always provided that properly fitting shoes are worn.

**The Hair.**—The hair of the head is intended for protection, and it is admirably adapted for this purpose: being a poor conductor of heat, and having its interstices filled with air, it guards the head from the heat of the sun in summer, and in winter, by preventing the rapid escape of the heat, it protects it from cold. Do not crop the hair of children, or of adults for that matter, close to the scalp. By exposing the scalp to the air and weather it naturally becomes dense, and the superficial layer comparatively thick, thereby interfering with the roots and proper nourishment of the hair, and probably in some degree assisting to produce premature baldness, which is so prevalent in the present day. Washing and “shampooing” the head is also carried to excess. The hair is rendered

dry and brittle by the use of alkaline washes and soaps and the natural oil and secretion destroyed: another factor in the production of baldness. As a rule, once in ten days is quite often enough to wash the hair in summer, and once in twenty days in winter, and then a carefully selected soap should be used. Castile or unscented glycerine soap is to be preferred. Meanwhile the hair may be kept clean by brushing night and morning. It is almost unnecessary to add that a child who delights to roll in the mud requires washing oftener than one of more cleanly habits. If from any cause other than evident disease the natural secretion of the scalp becomes scanty and the hair consequently dry and more or less brittle, a small quantity of purified lanolin may be applied: it should be used sparingly. Some scalps secrete the natural oil of the hair in greater quantity than others.

**Sleep.**—A healthy infant should, during the first few months of life, spend most of the time in sleep—about eighteen hours out of the twenty-four. The time of sleep gradually diminishes with the advance of age, so that at three years the day is pretty equally divided between sleep and wakefulness. The sleep of infants and children should not be interfered with; growth and nutrition are progressing slowly, steadily and surely during sleep, and nature should be allowed to have her way.

**The Bath.**—So much has already been said on the subject of bathing generally that a few words will suffice in regard to the infant's bath. The tepid bath (temperature about 85°) is to be preferred for common use, and should be given every morning an hour or so (not immediately) after the morning

meal. Do not plunge the infant suddenly into the water, lest a dread of the water may follow which will be difficult to overcome—a most unfortunate accident. First sponge the head, then gradually and gently immerse the body. A piece of soft flannel, upon which has been rubbed some fine castile soap, is passed rapidly over the surface of the body, particular attention being given to the outlets and flexures of the skin. The soap, which should be used sparingly, is then washed off, the infant removed to the lap of the nurse and the skin dried, without much rubbing, by means of a soft towel. Now, gentle friction with the hand, especially to the back and spine, will be found soothing and beneficial. Do not dally over the bath; the whole process should not occupy more than fifteen minutes. A rapid sponging with warm water (temperature about 92°) at bedtime, with gentle friction afterward, will be found very grateful and tends to induce sleep in the heat of summer or in tropical climates. Always wash thoroughly your sponge and flannel after using, and dry in the open air. The cold bath is not to be recommended for infants and young children. It is sometimes used to “harden them,” but often has a very contrary effect. An exception is made in favor of sea bathing for children of two years and upward, when the rules already laid down are to be observed. Now and then an extremely delicate and thin skin is noticed in an infant, with a lack of natural protective secretion. In such a case bathing must be used with considerable judgment. It is better to confine it to the necessary purpose of cleansing—and soap of any sort must be used cautiously, otherwise irritation, chapping and even troublesome eruptions are apt to occur.

**Infants' Food.**—So much has been said and written upon this subject, even in strictly "popular" works, that a certain amount of confusion and complication has arisen, also difference of opinion. The following lines are intended to be as simple and practical as possible, avoiding debatable ground, at the same time speaking with decision. Moreover, space does not admit of discussion.

The proper food for an infant until the age of six or eight months is its mother's milk exclusively, always provided the mother possesses health and strength. Unfortunately, in these days, a certain proportion of mothers are, from one cause or another, unable or unwilling to suckle their offspring, and food has to be obtained from some other source; the milk of animals, more or less modified, is substituted. Mothers suffering from any serious constitutional disease, such as syphilis, tuberculosis (consumption) in any form, and scrofula, must not nurse their infants—it would be a crime. For a similar reason the milk of diseased cattle should never be used for food. Next to the mother in point of suitability, comes a healthy wet nurse.

The milk of the cow is generally substituted for mother's milk, but, as it differs in composition materially from that of the latter, certain changes have to be made in order to imitate as nearly as possible the human milk. Asses' milk resembles human milk more closely than does that of the cow. Goats' milk is richer in fat and other matters and is not adapted for the first year of life, but is used largely in certain derangements of nutrition in childhood. Cows' milk contains more casein (curd), fat (cream), and albumen than human milk: the latter is richer in sugar. If, then, an infant has to be

"bottle-fed," use the following: One part of cows' milk to three parts of water, and a small quantity of sugar—milk sugar is to be preferred. Say a small teaspoonful to one pint. Do not boil the milk, but add the water while boiling. During the first month or two the infant should be fed every two hours, with an interval of five or six at night. Regularity in meal hours from the beginning is important. If the milk be discharged from the stomach in the shape of dense hard curds, substitute well-boiled and strained barley water for part or whole of the water used for dilution. Have no rubber tubes about your feeding bottle: a simple glass bottle and a proper rubber nipple are all that is required. Wash thoroughly in hot water after each use. About twelve fluid ounces daily is a fair average of food during the first month; this is gradually increased to about twenty-four at the fourth and fifth months; at the tenth month a healthy infant will consume from two to three pints a day. When the milk disagrees, or undue acidity of the stomach is evident, the addition of lime water in the proportion of one to six will be found serviceable. After the fifth month the dilution of the milk should be gradually lessened and a little cream added—a tablespoonful to a pint.

Milk has a remarkable power of absorbing gases and vapors; it also forms an excellent medium for the growth and development of bacteria and fungus. Germs of various diseases probably grow and multiply and infection is spread abroad. Typhoid and scarlet fever are frequently carried from one place to another by infected milk. It follows, therefore, that milk should be carefully handled and guarded. It should be obtained fresh from a reliable source at

least morning and evening (the "milk of one cow" is not necessary), placed in glass vessels and kept in a cool, clean place, away from light, and covered to prevent the access of dust. In the absence of "sterilizers" place the milk before using in a wide-mouthed glass vessel, cover the opening with a piece of cotton or cheese-cloth, and place it on the stove in a pan of cold water; remove the moment the water comes to the boiling point, and cool rapidly. Boiled milk is objectionable, infants dislike it, and it is more difficult of digestion. Sterilized milk will remain pure for several days. Of "sterilizers" Starr's and Arnold's are recommended.

As a rule, so long as an infant is growing and thriving and maintains perfect health on an exclusively milk diet, it need not be changed; but it is usual and not inadvisable to supplement milk by other articles of food as soon as the first three or four teeth appear. The varieties of food recommended are numberless. It will suffice to mention in this place a few of the best known and most commonly used: Oatmeal, the "Flour Ball," Robinson's Prepared Barley, Imperial Granum, Mellin's Food, Horlick's Food, Nestle's Food, properly prepared meat broths. These are all good in their places, and there are others equally good. In using prepared foods, examine carefully and see that they are perfectly fresh and free from all suspicion of mustiness.

It is a good custom to give an infant a fresh bone to use his teeth upon, and further, on a hard biscuit. The exercise will tend to strengthen the teeth and muscles of the jaw and to develop the numerous small glands situated within the mouth, whose secretion is so important in the early stage of digestion.

Observe that an infant is subject to thirst with the rest of us and that a drink of cold water now and then is not only refreshing but necessary.

Do not wean an infant during the heat of summer, unless obliged to by adverse conditions. The late fall is the most suitable season. A nursing infant—everything being regular—is less liable to the various diseases which prevail during the heated term than one recently weaned.

NOTE. — When the question of peptonized foods presents itself, call in a doctor.

A choice of one of the following dishes is all that is necessary for a healthy child of two years of age and upward:

**Breakfast.**—Oatmeal porridge, rolled wheat, hominy, corn-meal pudding (made of corn-meal, thoroughly boiled, and eggs), milk, fruit in season—nothing better than a good ripe apple. As age advances, in addition to any one of these dishes, a soft-boiled egg or a slice of fresh fish or omelette, or a roast potato with gravy, may be given, especially in winter. Milk or buttermilk should be taken with porridge and similar foods instead of molasses or syrup; it is more wholesome. Good syrup is not objectionable in itself, but should be used sparingly.

**Dinner.**—Vegetable or clear soup and one of the following dishes: Roast beef, mutton or fowl, broiled steak or chop, vegetables, potatoes, cauliflower, stewed tomatoes, spinach. For dessert, fruit, a light pudding, such as rice or custard, junket.

Fresh fish may be advantageously substituted for meat once or twice a week. Highly seasoned



dishes are not permissible. Salt is the only condiment necessary. A little variety is appreciated by children as well as by others. At dinner milk is not necessary: the only drink required is water, or lemonade, and these in small quantities during the meal. There is some doubt whether evening is not the most suitable time for dinner even for children of from—say, six years of age. This matter is mostly governed by custom and habit and will not be discussed here.

**Supper** should be a repetition of breakfast in a measure, omitting eggs and fish, and adding a little stewed fruit, now and then, and a small cup of chocolate. As to the interval between meals—say, four hours between breakfast and dinner, and five between dinner and supper. Bear in mind that in the tropics, and during the hot weather of summer in the north, the food should consist almost entirely of vegetables, fruit and cereals; whilst during the cold weather of the northern winter, an admixture of fat, animal food and vegetables is to be recommended.



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